United States Court of Appeals

for the Second Circuit

PETITIONER'S BRIEF AND APPENDIX

ORIGINAL

76-4049

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

Docket Nos. 76-4049
76-4061
76-4074

ITT WORLD COMMUNICATIONS, INC.,
RCA GLOBAL COMMUNICATIONS, INC.,
and WESTERN UNION INTERNATIONAL, INC.,

Petitioners,

against

FEDERAL COMMUNICATIONS COMMISSION
and UNITED STATES OF AMERICA,

Respondents,

AMERICAN TELEPHONE & TELEGRAPH CO.,
XEROX CORPORATION,
AMERICAN PETROLEUM INSTITUTE,
HAWAIIAN TELEPHONE COMPANY,

Intervenors.

PETITION FOR REVIEW OF A MEMORANDUM OPINION AND ORDER OF THE FEDERAL COMMUNICATIONS COMMISSION

APPENDIX

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UNITED STATES COURT OF APPEALS
FILED
JUL 30 1976
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

FCC 76-10
38875

In the Matter of	)	
	)	
Inquiry Into Policy to be Followed in Future Authorization of Overseas Dataphone Service	)	DOCKET NO. 19558

REPORT AND ORDER

Adopted: January 8, 1976 Released: January 19, 1976

By the Commission:

1. The instant proceeding was initiated by Notice of Inquiry released July 31, 1972 (36 FCC 2d 605), requesting comments regarding future Commission policies governing the provision of overseas "dataphone-type services." 1/ Present authorizations to both international voice and record carriers preclude the use of facilities for dataphone-type services, 2/ although AT&T's domestic authorizations contain no similar restriction on use of its message telephone network for record communications. Internationally, AT&T is essentially authorized to offer message toll telephone (MTS-voice only), private line voice, and program transmission services. The international record carriers (IRCs) offer a wide range of private line and switched record services, message telegraph and alternate voice/data (AVD) 3/ private line services. Among the specific services the IRCs provide are Telex, a customer-to-customer switched record service using telegraph-grade connecting circuits; Datel, a switched message and facsimile record service capable of transmitting at speeds up to 1200 bits per second between customer locations, which uses voice transmission only for cuing, and which is capable of interconnection with domestic services of AT&T and Western Union Telegraph Company; and AVD private line services.

1/ "Dataphone-type services," as used herein, permit subscribers to the domestic message toll telephone service, who have secured appropriate equipment, to use that telephone service to send data, facsimile or record communications alternately with voice at usage sensitive rates. The term "DAT/PHONE" is a registered trademark of the American Telephone and Telegraph Company (AT&T).

2/ The exception is the State of Hawaii, to which AT&T and Hawaiian Telephone Co. (HTC) jointly offer dataphone service (see AT&T et al. Data-Phone, 38 FCC 1222 (1965)).

3/ AVD is a voice-grade private line service in which the subscriber may use the circuit for both voice and record communications.

2. The present inquiry was designed to determine whether the public interest would be best served by authorizing customers to use their telephone for dataphone or similar services overseas and, if so, what carrier or carriers should be permitted to offer this service. To that end in our Notice of Inquiry we requested comments from carriers and other interested parties regarding demand for dataphone-type services; technical feasibility of providing such service over satellite as well as terrestrial circuits; current domestic dataphone usage; whether AT&T and/or the IRCs should offer the service and the costs, revenues, operating methods and arrangements with overseas correspondents associated with such offerings; the public interest considerations associated with authorizing the service; and any other relevant information. We have received a number of comments and replies 4/ and the matter is now ripe for decision.

3. While all of the parties, with the exception of WUT, agree that there is significant demand for overseas dataphone, they are divided in their contentions as to which carriers should provide such service. AT&T along with API, Comsat, EIA, HTC, Magnavox, USITA and Xerox assert that both the voice and the record carriers should be authorized to offer overseas dataphone-type service with the record carriers interconnecting with AT&T's domestic public switched telephone network. The IRCs (ITT, RCA, TRT and WUI) contend that such a situation would not only give AT&T an insurmountable competitive advantage but would eventually threaten the viability of their other services such as Telex and Datel. Therefore

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4/ Comments were filed by the following:

American Petroleum Institute (API)
American Telephone and Telegraph Company (AT&T)
Communications Satellite Corporation (Comsat)
Computer and Business Equipment Manufacturers Association (CBEMA)
Electronics Industries Association (EIA)
The French Telegraph Cable Company (FTC)
Hawaiian Telephone Company (HTC)
ITT World Communications Inc. (ITT)
Magnavox Company (Magnavox)
RCA Global Communications, Inc. (RCA)
TRT Telecommunications Corporation (TRT)
United States Independent Telephone Association (USITA)
Western Union International, Inc. (WUI)
Western Union Telegraph Company (WUT)
Xerox Corporation (Xerox).

Replies were filed by AT&T, Comsat, HTC, ITT, RCA, TRT, WUI and WUT. In addition, we received a letter from Estado Libre Asociado de Puerto Rico after the closing date for comments. Because of the importance of the issue, we shall consider the views expressed therein.

the IRCs allege that their very survival is dependent upon our precluding AT&T from providing international dataphone service. They further indicate that they could offer a more efficient and personalized service than that proposed by AT&T, and RCA describes such a proposed offering in some detail. Before addressing the issue of how international dataphone service should be provided and which international carriers should be authorized to offer such service, we shall consider whether the record demonstrates the need for such service.

4. As noted, all parties filing comments, except WUT, assert that there is an existing and growing demand for overseas dataphone-type services. Several parties presented inquiries to their customers with responses showing a substantial interest in an international dataphone-type service. Independent studies of the future of international communications and projections of data communications growth, which were cited in the comments, provide an indication as to the extent of future potential demand for dataphone services. Such studies have resulted in the following data regarding international communications needs: 52,000 facsimile terminals were in use in 1972 with 290,000 terminals projected for 1980; 5/ the number of data terminals is estimated to increase from some 600,000 in 1970 to about 8,000,000 by 1985; 6/ and international leased line data circuits will grow at an annual rate of 21% for the years 1976 through 1980. 7/ Data communications as a whole have been constantly growing as shown by the interest in the data market by overseas communications entities and the world-wide economic and business development of new data networks and services, and it appears that dataphone, if authorized, will add significantly to this growth. Domestically, dataphone-type services have increased at a rapid rate, and we find the record supports the view that a similar trend will occur internationally and rapid development of the market will result. We therefore find that the public interest would be served by one or more carriers offering dataphone-type services.

5. Also of concern in this Inquiry is the technical and operational feasibility of providing dataphone or a similar service via satellite. We raised this issue in our designation Order in order to resolve

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5/ Communications Report, December, 1972, pg. 32. (Both this and the following two references were cited by WUI in the attachments to its comments, pp. 3-4).

6/ Institute for the Future, The Future of the Telephone Industry, pg. 48 (1971).

7/ Data Transmission System Study Comsat Contract CSC-IS-369, May 1972.

certain questions regarding the general acceptability of satellite circuits for data transmission. It is necessary, of course, to consider the effects of the longer transmission time associated with a geostationary satellite on the efficiency of data transfer when error control systems are required. The problem is one of assuring that maximum efficiency is obtained by using error control systems compatible with satellite delay times. Appropriate error detection equipment is presently available with better systems being developed. The uses of overseas dataphone-type services will not be such that the general user should be concerned with the delay factor and thus with investing in special error control equipment. However, such special equipment is available where required, and it appears feasible for dataphone-type services to be offered via satellite as well as by undersea cable. Therefore, we find no reason to preclude the provision of such service over satellite facilities.

6. From the comments received it appears that there are substantial differences between the dataphone-type services proposed by AT&T and those services proposed by the IRCs. Basically, AT&T's service as proposed would simply permit the customer to couple a data set, facsimile, or other equipment to his telephone (this equipment could be provided by the customer or by AT&T) and utilize Bell's existing switched telephone network. Thus the overseas dataphone-type services which AT&T envisions would be alternate uses of the existing world-wide switched message telephone network, a system which has been engineered primarily for voice. On the other hand, the record carriers propose to offer features significantly different from those of AT&T. Such specialized features, as outlined in RCA's comments to this inquiry, are code conversion, multi-address capability. camp-on capability, overseas conditioned channels, deferred data mode, speed conversion and other individualized features that AT&T has not proposed to offer. Code conversion would provide compatibility between customers using dissimilar code formats. Speed conversion would allow data machines with different speeds to operate with each other. Multi-address capability would enable the routing of a call to more than one destination. Preferred data mode would provide for storing and forwarding of data at a later time to one or more addresses. Camp-on capability would permit the calling party to hold on the line for a limited time while attempting to set up the call in the event a busy link, channel or subscriber is encountered. In addition it will be possible to store the called address and retry setting up the call at a later time. While the more specialized IRC services would apparently be priced higher than AT&T's offering, the IRCs' customers could secure any or all of the specific features outlined above, thereby tailoring the service to their individual requirements and could, if appropriate, utilize services of both the IRCs and AT&T. Those who have no requirement for these specialized features and who find the capabilities

of the existing AT&T switched telephone network sufficient for their needs would then utilize AT&T's basic service at a lower cost. 8/

7. AT&T alleges it can offer the basic dataphone-type services without making any significant additions or modifications to its public switched network. As a result, it contends it would incur no additional costs other than those associated with the handling of the anticipated increase in overseas telephone calls. Accordingly, AT&T's charges for such service would be the same as those for overseas message telephone service, as offered in Section 3.7 of its tariff FCC No. 263. It should be noted that, for tariff purposes, the use of AT&T's transmission facilities for dataphone-type services is indistinguishable from their use for voice services, and voice service is expected to remain by far the greatest use of the facilities. 9/ By contrast, RCA and ITT estimate some additional investments and operating expenses will be associated with providing an international service similar to that which AT&T proposes. Despite these additional costs, the IRCs assert that their rates for such service will be comparable to those of AT&T for similar services. However, the more specialized services outlined above (see paragraph 6), would require additional investment and thus higher rates.

8. Since the IRCs would appear to be unable to undercut AT&T's rates for basic dataphone-type services and since users of AT&T's proposed service would access its MTS network more easily than the IRCs' systems, the IRCs assert that AT&T would, if permitted entry, dominate the international market for such services. They further allege that their existing services, such as Telex, would be so seriously impacted that AT&T entry would undermine the international carrier industry as it now exists. In addition, the IRCs interpret established Commission policy as precluding AT&T from providing overseas dataphone-type service. In particular, they point to our TAT-4 Decision, 37 FCC 1151 (1964) in which the IRCs were authorized to offer leased circuits for AVD use. AT&T was not

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8/ The services which we anticipate being offered by the IRCs are essentially an expansion of their present Datel and similar services, interconnected with the domestic switched message telephone system. We are aware that many of these proposed services cannot be considered to be included within our definition of dataphone service (supra, fn. 1) but are rather closer to the types of service which the IRCs are presently authorized to offer.

9/ AT&T has predicted, assuming both it and the IRCs provide overseas dataphone-type services, that the weighted ratio between overseas message data and voice traffic over its facilities will be 0.02 (or 2.0%) by 1980. Weighted ratio takes into consideration that use of overseas message data services in developed countries is greater than in other countries; e.g., in 1980 the data/voice ratio is estimated to be 0.035 in developed countries and 0.005 in other countries.

authorized to offer AVD, with the exception of certain pre-existing circuits for defense use, on the grounds that AT&T entry would undermine IRC services. Although the IRCs assert that the TAT-4 rationale should be applied in this Inquiry, we disagree that the situations are fully parallel.

9. The TAT-4 case involved an essentially new service, AVD, in which the subscriber leases a voice grade private line which he may use for both voice and record communications. Unlike the present situation, we found therein that both the IRCs and AT&T could offer the service with essentially the same investment and that competitive considerations dictated the authorization of only the IRCs to operate facilities in connection with that service. The instant inquiry involves the potential removal of a restriction which, in the case of AT&T, precludes use of the existing switched telephone network for a service which requires little or no additional investment by the carrier. The IRCs, by contrast, would incur some additional investment but have indicated that they will offer a more specialized service, capable of being tailored to the needs of the subscriber. Therefore, unlike the TAT-4 situation, we are faced here with different proposed services, meeting different subscriber needs, and for which different levels of investment will be required by the carriers.

10. Further, we believe the overriding consideration in this inquiry is in meeting an unmet need by giving the added flexibility to the customer to use the international switched message telephone system for both voice and data, similar to their authorized use of the domestic telephone network. Such a use would be privately beneficial without being publically detrimental and consistent with our long held view that the public's use of the public network should be made as flexible as possible. See Hush-A-Phone v. U.S., 99 U.S. App. DC 190, 193, 238 F. 2d 266, 269 (1956); Hush-A-Phone v. AT&T, 22 FCC 112, 113-114 (1957). This, as indicated above, can be done with little or no additional investment on the part of AT&T. These factors were not present in TAT-4 and distinguish the present situation from the circumstances of that case. This decision should in no way be construed as reversing this policy nor should it be interpreted so as to authorize AT&T to offer any other new services now or in the future.

11. Upon reviewing the record of this inquiry, we conclude that it is no longer appropriate to restrict the use of overseas message telephone service to voice-only. Customers with terminal equipment that is being used in conjunction with the domestic MTS network are prohibited from using that same equipment when making overseas calls, despite a need for such service. We find this restriction not in the public interest. Accordingly, we are directing the Chief, Common Carrier Bureau, to accept applications from AT&T, pursuant to Section 214 of the Act,

47 U.S.C. 214, to add dataphone-type services to the categories of service for which it may use its overseas facilities, as described herein.

12. We further find it to be in the public interest for the IRCs to expand their switched record services, such as Datel, and to interconnect their facilities with AT&T's domestic MTS network for this purpose. Thus, we anticipate that AT&T and the IRCs will offer different types of services and that the policy established herein does not promote competition for the sake of competition (cf. RCA Communications, Inc. v. F.C.C., 346 U.S. 86 (1953), Hawaiian Telephone Company v. F.C.C., 498 F. 2d 771 (D.C. Cir., 1974)). We expect, instead, that the different services which will be rendered will meet different public needs. Thus, we are limiting AT&T's overseas dataphone services at this time to those which may be supplied via its existing overseas switched network, excluding dedicated private line services. Furthermore, if substantial modifications are to be made to the capabilities of this basic overseas telephone system (e.g., converting to all-digital, expanding the bandwidth of a voice channel, installing specialized switching or other central office equipment, or making any other modifications which will enable AT&T to offer specialized dataphone services), we shall require AT&T to obtain further Section 214 authorization prior to installing or operating such facilities.

13. We realize that the IRCs may suffer some losses as a result of removing the restriction on the use of the overseas MTS network. Despite the opportunity granted to them by this inquiry, the IRCs have not justified their allegation that they would suffer a significant decline in Telex and AVD service such as to have a substantial adverse effect upon the provision of their services to the public. It appears to us, rather, that removing the present restrictions will principally serve the occasional user who has insufficient traffic to subscribe to Telex or private line services. Domestically, DATAPHONE, TWX, Telex and voice grade private line services (which may be used for voice and data transmission) have all been offered for many years and a market appears to exist for them all. Additionally, dataphone-type service has been authorized between the U.S. Mainland and Hawaii with no indication of a negative impact on other services. Nothing in the record of this case indicates that the offering of overseas dataphone-type services will significantly curtail the market for most other data services. It may somewhat affect the demand for present IRC Datel service, but as RCA indicated in its reply comments, Datel is not a major service of the IRCs. 10/ Further, Datel may be used by the IRCs as the backbone upon which to construct a specialized, switched data offering.

10/ The gross revenue from Datel service in calendar year 1974 for RCA, ITT and WUI (TRT does not offer this service) was $413,159. This is slightly over 0.1 percent of the IRCs 1974 operating revenue of $298,854,119. See Form 903 reports submitted pursuant to Section 43.31 of our Rules.

14. We realize that much of the IRCs' concern stems not from any immediate threat but from the long-range possibility that dataphone-type services may ultimately prove more flexible and cost-effective than Telex or AVD for the majority of users of international data services. Although the record does not support such a conclusion, this might be a potential threat to the viability of the IRCs if it should occur. However, our statutory mandate is to regulate telecommunications such that the public receives high quality service at the lowest cost. If the IRCs cannot effectively compete with dataphone-type uses of MTS, consistent with this Order, and if the service thereby fulfills a public need at cost-justified rates below those which the IRCs can justify for their own service, we shall not impose a protective umbrella to assure the IRCs a portion of the market.

15. The overseas dataphone-type services which we anticipate being offered are analogous to the MTS and private line services which AT&T and the specialized common carriers offer domestically. In our First Report and Order in Docket No. 18920 (the Specialized Common Carrier decision), 29 FCC 2d 870 (1971), we recognized, in the domestic private line field, "there is an increasing and widespread public demand for the availability of diverse and flexible means of meeting specialized communications requirements, and a substantial public need for the proposed service offerings" 29 FCC 2d 870, 907-8. Similarly we conclude that the record of the present inquiry clearly indicates an existing or latent public demand for both the type of service which AT&T proposes and the more specialized services outlined by the IRCs.

16. WUI has indicated strongly that it has had some difficulty obtaining interconnection with AT&T's domestic switched telephone network. It further asserts that such interconnection is necessary if the company is to serve customers outside of the gateway cities and thereby compete effectively with AT&T's international dataphone services. Although we are hopeful that appropriate agreements for interconnection can be reached, pursuant to our policies established for domestic common carriers, 11/ we shall entertain pleadings from the international carriers regarding what facilities and interconnections, not presently provided, are necessary for their proposed services. Such pleadings are to be filed within thirty days of the release of this Report and Order, and

11/ Bell System Tariff Offerings, 46 FCC 2d 413 (1974); aff'd sub nom Bell Telephone Co. of Pennsylvania v. FCC, 503 F. 2d 1250 (1974); cert. denied, 43 U.S.L.W. 3654 (1975).

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replies are due within fifteen days thereafter. Upon reviewing these filings, we shall issue any appropriate orders, including any necessary conditions to certificates of convenience and necessity.

17. AT&T's present authorizations granted pursuant to Section 214 of the Communications Act are limited to existing specified services. Accordingly, if AT&T wishes to offer a dataphone service, it must file an application to modify such existing authorizations to include dataphone service, consistent with the policies established herein.

18. We have recently received several letters concerning this inquiry from certain of the international carrier parties to the proceeding. WUI renews its allegations concerning the failure of AT&T to provide appropriate interconnections to domestic Bell switch facilities. This issue has been disposed of above (paragraph 16). RCA asserts that the record in this case may be outdated and should be updated prior to rendering a decision. This proceeding is a policy-making inquiry based upon the general international communications environment and the need for the initiation of certain switched services. None of the assertions made in any of the recent letters lead us to believe that any significant changes have occurred which would lead us to change the policy decisions reached herein. Finally, several of the letters treat the relationship between the present inquiry and our Docket No. 18875 proceeding, and the contention is made that these inquiries should be combined. We disagree. Docket 18875 is a general policy-making inquiry into international facilities planning and coordination. The instant proceeding deals with our policy regarding a single international service, and does not directly relate to Docket No. 18875.

19. Finally, we raised issues in our Notice of Inquiry regarding carrier arrangements with foreign correspondents. No evidence was submitted that arrangements have been negotiated at this time, but, we require such arrangements to be made and submitted prior to our granting the carriers' applications.

20. Accordingly, IT IS ORDERED, That the Chief, Common Carrier Bureau, is directed to accept for filing applications from both the American Telephone and Telegraph Company and the international record carriers in accordance with this Report and Order.

21. IT IS FURTHER ORDERED That Docket No. 19558 IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Vincent J. Mullins
Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

FCC 72-673
79948

Inquiry into policy to be followed in future authorization of overseas Dataphone service.

Docket No. 19558

Notice of Inquiry

Adopted: July 26, 1972; Released: July 31, 1972

By the Commission: Chairman Burch absent; Commissioner Johnson concurring in the result; Commissioner Hooks not participating.

1. By letter of June 17, 1971, the Xerox Corporation requested the Commission to give consideration to the removal of existing limitations which restrict the public's use of the switched telephone network from the overseas transmission of data and facsimile signals alternately with voice. It appears that this letter is growing evidence of an increasing public interest in the availability of a service, similar to that available among the 48 contiguous states and between those states and Hawaii, Alaska and Canada and commonly referred to as "dataphone" service. In general, dataphone service permits subscribers to message toll telephone service, who have secured appropriate equipment, to use that service to send data, facsimile, or record communications alternately with voice at regular message rates. The aforementioned letter asserts that currently available procedures use multiple carrier facilities for overseas transmission of data and facsimile signals and are unsatisfactory in meeting the needs of many users, as they induce the recording and retransmission of the signal at each international gateway resulting in so much loss of time, flexibility, message quality and confidentiality as to be unacceptable, even without consideration of the costs involved. The Xerox Corporation also asserts that many users have significant demands for data and facsimile service, but their requirements do not justify a dedicated private line for alternate or simultaneous transmission of voice and record communications.

2. American Telephone and Telegraph Company (AT&T) and the three principal record carriers were requested by letter dated July 2, 1971, to comment on the request of the Xerox Corporation. AT&T replied that the request appeared a reasonable one, and that AT&T customers in the overseas field have also indicated similar requirements. It further states that, while details remain to be worked out, AT&T takes a favorable view of the request and would file an appropriate application and tariff revisions as soon as practical.

3. RCA Global Communications, Inc. (RCA Globcom) and Western Union International, Inc. (WUI) submitted statements in which they maintain that their services, without accompanying unlimited voice use and without access to the domestic telephone network are not serving the public need. These companies and ITT World Communications Inc. (ITT Worldcom) maintain that dataphone service is essentially a record service, and under the principles of the Commission's TAT-4 decision (American Telephone and Telegraph Company, 37 F.C.C. 1151 (1964) cited by some of these carriers the international record carriers should be authorized to provide the overseas portion of the service with unlimited access to the domestic telephone systems. These carriers maintain that the telephone company should volunteer interconnection of its domestic network. ITT Worldcom suggests it will initiate negotiations for interconnections and ask the Commission to assist in this regard. RCA Globcom and WUI request that in the event of AT&T's failure to permit interconnection, the Commission should order it to do so. These carriers state, as indicated, that the interconnection of the domestic telephone network with their facilities is technically feasible, but they include no data on equipment required for such purpose; the cost thereof; the procedures for handling calls, including those involving direct distance dialing and those handled by operators; the delay, if any, in calls handled by the telegraph carriers' overseas facilities; prospective rates; billing procedures; divisions of tolls among the telephone company or companies involved, the international record carriers and the foreign carrier or carriers, availability of direct circuits to overseas countries, and the procedures and arrangements for the handling of calls at and beyond these carriers' overseas terminals.

4. ITT Worldcom notes that initiation of the service depends on first obtaining agreement with its foreign correspondents. It believes that initiation of the service should be based on an international consensus regarding operating agreements and standards. It further states the CCITT has a joint working party with respect to new networks and data transmission and that further information on this subject should be forthcoming. Monthly reports filed with the Commission do not indicate there have been negotiations between the United States carriers and foreign countries. The willingness of the foreign carriers to participate in providing the service either with the record companies, the telephone companies, or both, and particularly the possibility of the interconnection of the record carriers' overseas circuits to the foreign telephone networks are matters to be explored and considered in formulating a policy for the provision of overseas dataphone service.

5. The record carriers also maintain that if the telephone company is permitted to provide dataphone service to overseas points there will be a serious adverse economic impact on their existing services. They do not however, give us specifics with respect to the types of traffic, the estimated amounts of revenue to be affected, the basis of such estimates or the expected volume of traffic and revenues forecast for the dataphone services.

6. In the Commission's recent inquiry into practices to be followed in the future licensing of facilities for overseas communications (Docket Number 18875), both RCA Globcom and WUI submitted estimates of circuit requirements predicated upon the record carriers being authorized to provide the service. During the course of that proceeding remarks were made indicating that dataphone service is totally impractical over satellite circuits. WUI, in that proceeding, indicated cable circuits are essential for providing dataphone service. In response to such claims, the Communications Satellite Corporation (Comsat) states that dataphone service is being provided via satellite circuits between Hawaii and the Mainland. Comsat does state, that some error detection and correction systems essential to some data transmission systems are not technically compatible with satellite circuits in that they were developed for cable application. It further states, however, that there is new equipment on the market that adequately performs the required error detection and correction functions when used with satellite circuits. ITT Worldcom, WUI and RCA Globcom, in their most recent comments, have not indicated whether or not they believe satellite circuits will be satisfactory for providing dataphone service with the use of error detection and correction equipment which Comsat alleges is suitable for use with satellite circuits.

7. WUI's initial application for satellite circuits for service to Europe (File No. T-C-1896) among other things requested twenty-five satellite circuits for providing dataphone service to Europe. This portion of the application, although withdrawn, requested that the record carriers be accorded the exclusive right to provide dataphone service; that AT&T be required to provide interconnection between its domestic telephone network and the record carriers' overseas circuits; and that AT&T be denied satellite circuits for such use unless it agreed to make the requested interconnections. The Western Union Telegraph Company (WUT) filed comments in this matter indicating a desire to provide the domestic portion of the dataphone service or other data/voice overseas service. Questions were also raised as to the compatability of the equipment of WUT and of AT&T for dataphone service with equipment of foreign administrations. Contrary to the assertions of the record carriers, AT&T stated its equipment for dataphone service is compatible, except in minor respects, with overseas equipment built to CCITT specifications. With respect to WUI's claim that the record carriers should be accorded the exclusive right to provide dataphone service, based in part on the Commission's TAT-4 proceeding, AT&T took the position that such decision was not determinative of whether or not AT&T should provide dataphone service. AT&T calls attention to the Commission's statement, in connection with the revision of its tariff and that of Hawaiian Telephone Company to introduce dataphone service between the Mainland and Hawaii, that AT&T's right to furnish dataphone service to overseas points, except Hawaii, will be decided by the Commission when and if AT&T applies for authorization to provide such services. Hawaiian Telephone Company also filed a statement in this proceeding in opposition to interconnection between telephone networks and the facilities of the international record carriers.

8. On July 14, 1972, WUI tendered for filing an application again requesting authorization pursuant to Section 214 of the Communications Act of 1934 to: (a) Provide overseas dataphone service, this time to all overseas points; and (b) acquire on an indefeasible right-of-user basis a one-half interest in 12 voice circuits in the CANTAT-II cable system for the provision of this service between the United States and the United Kingdom. The application, as tendered, is defective in that it fails to provide most of the essential information required to be contained in such an application by Section 63.01 of the Commission's Rules. The application, among other things, fails to: (a) Describe how the proposed interconnection with the domestic telephone network would be effectuated; (b) give a description of the cost of necessary equipment needed to effect such interconnection and the other costs involved in providing the proposed service; (c) recite any estimate of demand for the proposed service; (d) give any estimate of the revenues expected to be produced by the proposed service; and (e) provide a statement of the proposed tariff charges and regulations for the proposed service. In view of these deficiencies, the application will be returned as unacceptable for filing and consideration pursuant to Section 1.746 of the Commission's Rules. In any event, as noted below, we do not believe the processing of individual applications would be a satisfactory method of arriving at policy determinations in this matter.

9. The foregoing indicates that there are numerous factors to be considered in determining whether or not dataphone or a similar service should be authorized to new overseas points, and which carrier, or carriers should be authorized to provide the service. We feel that we can best resolve the various questions by adopting policies governing the provision of dataphone service in the context of this inquiry rather than in passing on separate applications by the carriers to provide such service. We are therefore initiating this inquiry pursuant to Sections 201, 202,205,212, 403, 4(i), 214 and 303(b), of the Communications Act of 1934, and Subsection 201(c) of the Communications Satellite Act. To this end we are requesting interested parties to submit information, views and recommendations with respect to the following matters (whenever appropriate, the data should be presented on a year by year basis through 1980):

(a) The nature and extent of the current and expected public demand for dataphone or an equivalent service between U.S. and overseas points, quantified in terms of messages and minutes, and the factors underlying such estimates.

(b) The nature and extent of current public usage of dataphone service between the contiguous 48 states and overseas points with which the service is now authorized.

(c) The technical and operational feasibility of providing dataphone or an equivalent service via satellite, including the availability and cost of error detection and correction equipment.

(d) Whether the restrictions set forth in the facility authorizations issued to AT&T and in the message toll telephone tariffs of AT&T implementing such authorizations should be removed to permit use of the public switched telephone network for the overseas transmission of data and facsimile alternately with voice communications; and, in this connection,

(i) the costs of such proposed service, by principal items of investment and operating expenses;

(ii) the charges proposed to be made for such service;

(iii) the revenues, gross and net, expected from such service;

(iv) the operating methods which would be applied to such service; and

(v) proposed arrangements, operating and financial, with overseas correspondent;

(e) Whether the international record carriers should be authorized to provide overseas dataphone or an equivalent service and, in this connection,

(i) the nature of interconnection and operating arrangements and agreements that would be involved between each international record carriers and domestic carriers, including billing practices, division of tolls, etc.

(ii) the effect of such arrangements and agreements on speed, efficiency, quality and cost of service which may be anticipated, in case of both customer and operator dialed calls;

(iii) proposed arrangements, operating and financial, with overseas correspondents,

(iv) the costs which would be incurred by each respondent for such service, by principal items of investment and operating expenses;

(v) the charges proposed to be made for such service

(vi) the revenues, gross and net, expected from such service.

(f) The relative efficiencies of record carriers, on the one hand, and voice carriers, on the other, in furnishing such services;

(g) An estimate of number of circuits, in addition to those authorized each carrier for existing services, that will be required for the proposed services;

(h) The effect on the revenues and service requirements of each respondent carrier, should one or more carriers in addition to said respondent be authorized to provide overseas dataphone or equivalent services;

(i) How the public interest, convenience and necessity will be served by authorizing one or more international carriers to provide overseas dataphone or equivalent services;

(j) Any other information considered relevant to this inquiry.

10. Pursuant to the applicable procedures set out in Section 1.415 of the Commission's Rules and Regulations, interested parties may file written comments on or before the 60th day after release of this notice and reply comments on or before the 90th day after release of this Notice relating to each of the foregoing matters applicable to it. An original and fourteen copies of all comments shall be filed with the Commission. The following carriers are especially requested to respond to this inquiry and

the appropriate questions above: Puerto Rico Telephone Company, All America Cables and Radio, Inc., American Telephone and Telegraph Company, Communications Satellite Corporation, French Cable Company, Hawaiian Telephone Company, ITT World Communications Inc., the Virgin Islands Telephone Company, ITT Communications, Inc.-Virgin Islands, Western Union International, Inc., RCA Alaska Communications Inc., RCA Global Communications, Inc., Tropical Radio Telegraph Company, The Western Union Telegraph Company, and the United States Independent Telephone Association.

All persons filing comments should serve copies thereof on each of the persons listed above. Reply comments shall be served on the foregoing persons as well as any interested party filing original comments.

FEDERAL COMMUNICATIONS COMMISSION

Ben F. Waple

Ben F. Waple
Secretary

cc: Messrs. Westfall, Dunleavy, Aibel, Bohon, Gen. McNitt Messrs. Tower, Podmolik, Reynolds, Wells, Canestrari, Cassidy, Gancie, Ganschow, Orso, Edgar, G. White, Murphy, Bush, Kilburn, Watt, Slater, Ryan, Kirkwood, Barbely, Hedborg, Varner, McKinney, Intartaglia, Duarte, Abbott

ORIGINAL
FILE

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

RECEIVED BY FCC

SEP 28 1972

In the Matter of

An Inquiry into Policy to be followed)
in future authorization of overseas)
Dataphone service) Docket No. 19558

COMMENTS

The Magnavox Company, pursuant to Section 1.415 of the Commission's Rules and Regulations and the Commission's NOTICE OF INQUIRY, released July 31, 1972, respectfully submits the following comments addressed to portions of numbered Paragraph 9 of the above-referenced NOTICE OF INQUIRY:

1. Regarding lettered subparagraph (a), Magnavox believes the U. S. domestic experience with dataphone-type service can be extrapolated to predict overseas usage. Domestic dataphone-type service has tended to be a new usage, rather than a replacement for older service, like Telex. In the specific case of telephone coupled facsimile traffic, with which we are most familiar, we believe that: a majority of U. S. originations will be acoustically coupled (as with domestic); it will be used primarily (but not exclusively) from business telephones; that within three years the dataphone-type usage on overseas telephone calls will be very similar to domestic usage; and that direct extrapolation from domestic usage is valid.

2. Regarding lettered subparagraph (c), we note that our facsimile equipment appears to work equally well over satellite paths as for cable, the longer absolute time delay of satellite having no effect.

3. Regarding lettered subparagraph (d), Magnavox strongly urges removal of the restrictions. In the case of facsimile usage, no additional costs or charges are involved, since the voice telephone is transparent to

"voice-like" signals. Additional revenue will come from additional load, which, based on extrapolation from domestic experience, is a very small percentage.

4. Regarding lettered subparagraph (e), it is submitted that if the record carriers wish to provide this service by interconnection to the domestic switched telephone network, we think they should be authorized to do so. Then the public can elect to use either the conventional, existing telephone call or the interconnected record carrier at his free market choice.

5. Regarding lettered subparagraph (i), Magnavox believes that the public interest will be best served by removing the restriction against the public use of data and facsimile signals over the overseas switched telephone network and by permitting record carriers to furnish interconnected overseas service. The public interest will not be served if only the record carriers are permitted to furnish such service.

6. Regarding lettered subparagraph (j), Magnavox submits the following statement of philosophy:

Definition:

"Voice-like signals": Audio signals within the telephone frequency band which do no harm to the telephone network, which serve the user's convenience, and which are reproducible at the destination as sounds by the telephone instruments to which the public is accustomed.

In the 40 months from January, 1969, the Bell Companies furnished 8,657 data access-automatic and 6,494 data access-manual arrangements

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(TELECOMMUNICATIONS Vol. 38, No. 32, Aug. 14, 1972, P. 12).

During the same time period the number of facsimile terminals coupled to the Switched Telephone Network has risen from an estimated 5,000 to an estimated 50,000 terminals. We estimate that over 80% of the terminals are acoustically coupled, in which the sound reproduced by the telephone instrument (the purpose for which the telephone was created) carries the special language from which the facsimile terminal extracts a copy of the distant subscriber's document. The conclusion to be drawn from this usage is that the American telephone subscriber has found that acoustic coupling is the preferred method for making use of the telephone capability for delivery of Voice-Like facsimile signals.

Acoustic coupled facsimile makes use of the telephone call "as is", without placing any additional burden on the common carrier, or in any way departing from the telephone's traditional service of reproducing subscriber's sounds when they call each other at their expense under charges in accord with the published tariffs.

In the development of the first commercially successful acoustic coupled facsimile system (the Xerox-Magnavox Telecopier^{R}) the switched telephone network was taken as the given environment for reproduction of the sounds employed. Dataphone had used the switched telephone network as a vehicle of delivery for voice-like signals, but created special terminals for introduction and exit from the common carrier facilities. The Xerox-Magnavox Telecopier carried Dataphone service one step further. The acoustically coupled Xerox-Magnavox Telecopier removed the last vestige of distinction between human generated voice calls and voice-like facsimile calls by using the existing telephone instruments themselves as the vehicles of introduction and exit from the common carrier facilities.

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We hold that in the period since 1966 (when the Xerox-Magnavox Telecopier was introduced) the public has become accustomed to the use of voice-like facsimile signals as a normal usage of the telephone for service its convenience. The public is entitled to the fruits of invention which extend the utility of the conventional telephone call. The burden is upon the designer of voice-like signals to fashion them with sufficient skill to serve his intended purposes; and so long as the signals do no harm to the telephone network, their use should be limited only by the competition of the marketplace in which the telephone subscriber elects what value he is willing to place on the convenience with which he is served by the employment of voice-like signals.

The extant tariffs have placed constraints which adequately circumscribe such signals (e.g., FCC Tariffs 260, 263, par, etc.). In ten years of Dataphone facsimile usage (e.g., with Dataphone Data Set 602 series) and six years of acoustic coupled voice-like facsimile signal usage (e.g., Xerox-Magnavox Telecopier, Magnafax 850, et.), there has been no harm to the switched telephone network from such facsimile usage. Indeed, the switched telephone network is oblivious to the fact of voice-like signal traffic, since the telephone service is equally transparent to human generated voice (or mechanically generated voice, for that matter) and voice-like signals generated by facsimile terminals.

There is not now, nor should there by, any distinction whatsoever between voice and voice-like signals travelling along the switched telephone network. The censorship of the subscriber's language should not extend beyond those acts of profanity, annoyance, or safety-interference which offend or endanger the public, and the employment of voice-like signals, per se, does

not fall within these categories.

The American public should not be denied the same convenience of the use of voice-like signals on telephone calls to distant foreign telephones that it has come to enjoy on calls to domestic telephones if our creative genius can provide it without harm to the telephone networks involved.

Voice-like signals have been tested on telephones in many parts of the world (e.g., in the United Kingdom, France, Belgium, West Germany, Italy, Australia, Thailand, Spain, Venezuela, Brazil, and elsewhere), and we have thus far been able to find solutions which rendered the signal voice-like for each telephone network. In fact, the signal employed by the Magnafax 850E (and also by certain other facsimile equipment, as for example, the Telecopier 400 in Europe) is voice-like for the telephone networks encountered in Transatlantic calls, and conforms to CCITT proposed standards except in minor regards, and these exceptions are being proposed with wide support for incorporation as improvements based upon practical usage to the T2 Facsimile Standards recommendations of the CCITT. There is thus no technical reason for denying overseas voice-like signal usage (so called dataphone usage).

Therefore, permissive use of overseas telephone service for voice-like (dataphone type) signals should be recognized. Since no special facilities are required, no additional expense to the common carriers is involved. Such permissive use of voice-like signals (dataphone type) should be made available to the American public forthwith.

With regard to the overseas record carriers, they are serving a useful function by providing special circuits to accommodate transmission of data

signals requiring special conditioning. They should continue to provide this service. Our concern here, however, is not in the furnishing of new services, but of permissive use of existing services.

The Telex network (some 80,000 Telex and TWX subscribers, according to TELECOMMUNICATIONS, Aug. 14, 1972, p. 24) serves a public need for message delivery. While it is technically feasible to couple a teletypewriter to the telephone and encode the teletypewriter signal in voice-like format, the nature of Telex service as a type of telegram, able to deliver a concise message in what is known as "telegraph style" language, is different in kind from the delivery of copies of documents characteristic of facsimile. While the document may contain a copy of a telegram, the copy can contain any of the rich variety of graphic representations found in literature, correspondence, reports, graphs, pictures, art, or other graphic forms not readily translatable into the restricted medium of "telegraph style". Facsimile is more akin to mail than to the telegram. Our experience in the United States has been that marketing of facsimile equipment normally addresses a customer need which the teletypewriter (Telex service) cannot satisfy.

Facsimile service is a new and different service from Telex. By use of specially conditioned circuits it is possible to provide for facsimile transmission beyond the scope of that facsimile transmission feasible through switched telephone network calls. The record carriers are a logical source for such special circuits. They are not, however, a logical source for providing telephone service, for that is already well supplied, and they would

ot be expected to enjoy the economies of scale and experience in providing uch service as is realized by the telephone common carriers. Within the onstraints of a voice-like signal, the telephone networks developed for that urpose should be employed.

The concept of "data" signals as simple on-off pulses of the teletypewriter baud variety is a holdover from a bygone and simpler era. Data may be couched in voice-like signals, and voice may be couched in data (e.g., the T-1 carrier, the Vocoder) signals. The distinctions between types of signals should relate to their requirements for propogation and survival, rather than to their content. Thus "packaging" is relevant for the requirements of how to handle the package, but is not relevant for what is inside the package. Telex is structured to handle a "package" of alphabet encoded text; what the text says is not the record carrier's concern. The telephone call is structured to handle a "package" of voice or voice-like signals; but the conversation or the letter inside the signal "package" is not the common carrier's concern.

We urge the FCC to permit overseas dataphone type service as a permissive use of overseas telephone calls. We urge that the record carriers be required to continue to furnish special circuits as they are now doing.

Respectfully Submitted,

THE MAGNAVOX COMPANY

By Samuel J. Rozel

Samuel J. Rozel
Vice President - General Counsel

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FILE

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SEP 29 1972

F. C. C.
OFFICE OF THE SECRETARY

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C.

In the Matter of	)	
	)	
Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19508

COMMENTS OF THE COMMUNICATION TERMINALS AND INTERFACES SECTION OF THE COMMUNICATIONS AND INDUSTRIAL ELECTRONICS DIVISION OF ELECTRONIC INDUSTRIES ASSOCIATION

Respectfully submitted,

ELECTRONIC INDUSTRIES ASSOCIATION

George Stamps, Chairman
Communication Terminals & Interfaces Section
Communications and Industrial
Electronics Division

John Sodolski
Staff Vice President
Communications and Industrial
Electronics Division

September 29, 1972

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C.

In the Matter of	)	
	)	
Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19558

COMMENTS OF THE COMMUNICATION TERMINALS AND INTERFACES SECTION OF THE COMMUNICATIONS AND INDUSTRIAL ELECTRONICS DIVISION OF ELECTRONIC INDUSTRIES ASSOCIATION

The Communication Terminals and Interfaces Section, Communications and Industrial Electronics Division, Electronic Industries Association (hereinafter referred to as "the Section") respectfully submits the following comments addressed to portions of Item 9 of the Instant Notice of Inquiry.

With regard to (a), we believe the United States domestic experience with dataphone-type service can be extrapolated to predict overseas usage. Domestic dataphone-type service has tended to be a new usage, rather than a replacement for older services, like Telex. Much of the dataphone-type traffic originates and terminates with acoustic couplers. The primary (but not exclusive) usage is from business telephones. We believe that within three years the dataphone-type usage on overseas telephone calls will be very similar to domestic usage, and that direct extrapolation from domestic usage is valid.

With regard to (c), the facsimile terminals, and many of the data terminals, work equally well over satellite paths as for cable, the longer absolute delay

of the satellite path having no effect. The industry is willing to accept the overseas satellite telephone call "as is," and to accommodate to the longer absolute time delay when necessary.

With regard to (d), we strongly urge removal of the restrictions. In the case of suitably modulated data and facsimile signals, the overseas telephone call is as transparent to them as for voice signals. The call is O.K. "as is," and we recommend that no changes be made in equipment, hence no additional costs or charges are involved. Additional revenue will come from additional load, which, based on extrapolation from domestic experience, is a very small percentage.

With regard to (e), if the record carriers wish to provide this service by interconnection to the domestic switched telephone network, we think they should be authorized to do so. Then the public can elect to use either the conventional, existing telephone call or the interconnected record carrier for delivery of dataphone-type traffic, based on their relative advantages to him as he sees them.

With regard to (i), the public interest will be best served by removing the restriction against the public use of data and facsimile signals over the overseas switched telephone network and by permitting record carriers to furnish interconnected overseas service. The public interest will <u>not</u> be served if only the record carriers are permitted to furnish such service.

With regard to (j), the American public has become accustomed to dataphone-type usage as a part of his telephone call capability. There is no

technical impediment to dataphone-type usage on overseas calls, and the American public should not longer be denied this logical extension of conventional telephone usage.

Respectfully submitted,

ELECTRONIC INDUSTRIES ASSOCIATION

George W. Stamps

George Stamps, Chairman
Communication Terminals & Interfaces Section
Communications and Industrial
Electronics Division

John Sodolski
Staff Vice President
Communications and Industrial
Electronics Division

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas data-phone service.	)))	DOCKET NO. 19558

COMMENTS OF XEROX CORPORATION
PURSUANT TO NOTICE OF INQUIRY

As the Commission noted in the very first sentence of its Notice of Inquiry in this matter, Xerox Corporation has exhibited a substantial interest in the instant proceedings by virtue of the submission of its letter of June 17, 1971, which requested the Commission to consider removal of the present limitations upon the international transmission of data and facsimile signals.

In one sense, of course, Xerox' interest in expanding and facilitating the public's utilization of data services* is parochial: we market important lines of facsimile and data communications equipment on several continents; we annually expend many millions of dollars on research and development to increase the flexibility and efficiency of these and other communication products;

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* We use the term "data services" in this document to refer to the provision of data and facsimile services through terminals connected to the public switched telephone network. The terminal equipment may be totally or partially provided by the customer. It may be electrically or acoustically coupled to the network.

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naturally, we view the possible lessening of present restrictions on the facile international use of these devices as a business opportunity of some consequence.

In quite another sense, however, Xerox' interest is of a more universal nature. For many years, Xerox has considered itself a responsible participant in a world becoming increasingly dependent upon speedy and precise information flow - one with an ever increasing need to conform data to a meaningfully structured "architecture of information".

The outlines of the methods of achieving this goal on a global scale are within perception: the world is becoming "smaller" by virtue of communications technology. And this process is itself, regenerative. More effective information flow leads to improved technology, and this, in turn, further enhances the flow of information.

In this regard, we believe that the Commission's decision herein will have a significant influence upon the development of international networks and facilities as well as systems research and product development leading to new communication capabilities; and we are confident that the Commission will be guided in making this decision by an imaginative extrapolation of present and anticipated international communication capabilities.

Surely, the participants in this proceeding will agree that an increased facility and efficiency of infor-

mation exchange on an international plane is an objective sought by all. Undoubtedly, a variety of methods for reaching this objective will be presented for review by the Commission.

While considering the legitimate interests of the participants of record herein, the Commission must also recognize the concerns of the many "interested parties" who may well be without active representation here and, who, indeed, may be unaware of the existence of these proceedings. We refer, of course, to the present and future users of the domestic public switched telephone network. We believe these parties desire - and should be accorded - expansion of the flexibility and utility of this network**; we believe, moreover, that a Commission decision which permits extension of the usefulness of the conventional telephone, with its associated data and facsimile terminal devices, to international applications akin to domestic uses will lead many customers to find communication benefits not previously considered.

**We have attached hereto letters from a number of domestic companies commenting upon their requirements for international data services in response to a letter we issued on August 31, 1972, a copy of which is also attached. Because of the present time constraints, our inquiry was limited - and, as of this date, many responses are outstanding. We feel, nevertheless, that those companies which have responded timely are representative of a much larger class of potential users.

In short, we believe that the Commission should strive to give telephone users as many options for use of the public network as are technically and economically feasible.

These users now have the ability to utilize that network (on a domestic basis) for freely interchangeable voice and non-voice transmission. We believe that they should be permitted to conduct international transmission under the same rules which apply to domestic transmission, for as we indicated in our letter of June 17, 1971, the present tariff restriction constitutes a significant and unwarranted impediment upon users:

> "The result of this restriction is to require American users having need for international data or facsimile transmission or reception to either lease dedicated international private lines or rely upon significantly more cumbersome procedures utilizing multiple carrier facilities.
>
> Many users cannot economically justify a dedicated international private line. They do, however, have significant requirements for demand type service. In addition, many users have requirements for international service from multiple locations within this country which cannot be met by the more limited point-to-point service of a private line. Such service would be available if interconnection with the public telephone network were permitted.
>
> Currently available procedures using multiple carrier facilities for international transmission of data and facsimile signals are likewise unsatisfactory to meet the needs of many users. Those procedures presently involve a recording and retransmission of the signal at each international gateway

and result in such loss of time, flexibility and message quality and confidentiality as to be unacceptable even without consideration of the costs involved."

Specifically, we recommend that the Commission render a decision herein which removes this impediment and which results in:

1. The immediate amendment of AT&T Tariff 263 in such fashion as to render permissible the international transmission of facsimile and data over the public switched telephone network; and
2. The direct interconnection of record carrier facilities with the public switched telephone network as an additional option for users who have a need for international data services.

Our recommendation is not "either/or" in nature - we feel that the provision of both types of service will effect optimum customer benefit.

RESPONSE TO COMMISSION REQUEST FOR INFORMATION

In Section 9 of its Notice of Inquiry, the Commission set forth a number of matters on which it asked for information. Several of these subjects can properly be answered only by the responding carriers. There are, however, some matters to which we can respond directly. Our views are given in the paragraphs below related to items of Section 9.

9 (a) The nature and extent of the current and expected public demand.

At this time we are unable to present a realistic quantitative market forecast. We do believe, however, that there exists a substantial latent market for this type of communication application and that development may prove rapid. The history of domestic traffic on the public switched telephone network shows a steady exponential growth. While voice traffic has increased at a significant rate, non-voice (data service) has increased at an even greater rate.

It is our view that international traffic on the public switched telephone network should follow a similar trend. Thus, voice traffic will continue to expand exponentially and non-voice traffic will grow even faster for the foreseeable future.

In this regard, it is interesting to note that while domestic toll telephone calls per person are currently increasing at a rate of 10 percent per year, overseas calls per person are increasing at a rate of 25 percent per year.*** We

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***Pierce, "Communication", Scientific American, 31-41, September 1972

believe that the overseas calls for non-voice use could increase at a rate even greater than 25 percent per year for many years after initial establishment of application patterns by customers.

9 (c) The technical and operational feasibility of providing data service via satellite.

The provision of data services via satellite is entirely feasible with today's terminal hardware, transmission facilities and system software. We are convinced that technical feasibility has been demonstrated successfully.

The increased complexity of error detection and correction procedures and associated terminal hardware is relatively minor. The costs of digital logic circuitry and buffer storage have experienced significant decreases in the past few years.

Users of the public network for international communication must be prepared to handle their traffic over satellite links. We believe that the advantages of using the public network for international transmission of data and facsimile signals far outweigh the relatively small increased costs at the user terminal.

9 (d) Authorization of AT&T.

We believe the restrictions contained in the facility authorizations and in the message toll tariffs of AT&T should be removed immediately so that the public switched telephone network may be used for overseas transmission of data and facsimile alternatively with voice communications. We see no need for delay, because we recommend that no changes be made in the facilities provided by the public switched telephone network; only a tariff wording change is required.

The charges to telephone users should be the same as those currently in effect for voice communications. A user must be able to change at will from one to the other while an overseas call is in progress.

9 (e) Authorization of record carriers.

The provision of international data services by record carriers represents an additional option which should be open to users of the public switched telephone network. Because we believe these users should have as many options as possible, we recommend approval by the Commission. Interconnection of the international

record carrier facilities with the public switched telephone network will be required.

SUMMARY

Xerox Corporation submits the following views and recommendations:

1. Public use of international data services can be perceived as an important market: we expect it to grow at an even greater rate than the number of international voice calls.

2. It is most important that all users of the public switched telephone network be considered in the decision which the Commission makes in this matter. Concern must not be limited to the carriers, or to those entities with large and constant need for international data services.

3. Telephone users should be permitted to make alternate voice and data calls to points overseas and should be accorded optional employment of either the public switched telephone network or record carrier facilities via interconnection with the public switched telephone network.

Respectfully submitted,

XEROX CORPORATION

By: Robert F. O'Connor

Robert F. O'Connor
Staff Counsel

APPENDIX

August 31, 1972

Dear Sir:

In June of 1971, Xerox Corporation requested that the Federal Communications Commission give consideration to the removal of existing restrictions on the public's use of the switched telephone network for the overseas transmission of facsimile and data signals.

As you may be aware, under the terms of AT&T tariff no. 263, general business transmission of facsimile and data is restricted to the 50 states and Canada when direct electrical connection to telephone company facilities is involved.

We feel that this restriction unduly inhibits international transmission of facsimile and data by the business community and general pbulic.

On July 31, 1972, the Federal Communications Commission released a Notice of Inquiry with respect to this subject. Undoubtedly, the telephone companies and the record carriers will present their views both as to the desirability of an international facsimile and data service and as to the appropriate party or parties to provide such a service.

We would appreciate your views.

Specifically:

1. Is there a present or potential need for international transmission of facsimile and data in your company and how great is that need?

2. Could that need best be served by:

   (a) Use of the present voice network for international transmission of data and facsimile.

(b) Interconnection of the international record carriers with the DDD for such transmission.

(c) Both of the above.

Since we have only a few days to prepare our own response to the Notice of Inquiry, I would appreciate early receipt of any comments you may wish to make. Will you please indicate as well whether we have permission to reference your views in our response to the FCC.

Very truly yours,

David Klein

David Klein,
Manager, Graphic Communications
Products

DK/mjm

BASF Wyandotte Corporation

100 Cherry Hill Road
P. O. Box 181
Parsippany, New Jersey 07054
(201) 263-0200

September 13, 1972

Mr. David Klein, Manager
Graphic Communications Products
Xerox Corporation
Rochester, New York 14644

Dear Mr. Klein:

This is with reference to your letter regarding the FCC Notice of Inquiry on the matter of removal of existing restrictions on the switched telephone network for the overseas transmission of facsimile and data signals.

We do feel that there is, for us, a potential need for international transmission of facsimile and data. The degree of this need is not known specifically at this time, but I should point out that we are a member of the BASF Group which functions worldwide.

We feel that this need would be best served by both use of the present voice network and interconnection of the international record carriers with the DDD network providing that the international carriers make their inteconnection in a manner to protect the DDD network as has normally been required by A T & T.

You do have our permission to refer our views in your response to the FCC.

Very truly yours,

Horton S. Allen
Manager
Building & Office Services

ph

cc: Gen. A. C. Welling

The Foxboro Company Foxboro, Massachusetts, U.S.A. 02035 • Telephone (617) 543-8750

September 8, 1972

Mr. David Klein, Manager
Graphic Communications
Xerox Corporation
Xerox Square
Rochester, New York 14603

Dear Mr. Klein:

Regarding your inquiry dated August 31, 1972, The Foxboro Company currently transmits administrative information on a one quarter speed, leased channel between Foxboro, Massachusetts and Redhill, England. If costs were lower and services more easily accessible, the potential for increasing international data transmission would be much greater.

I do not feel that the current DATEL offering of the international carriers is an adequate service offering between Telex and full period voice grade data transmission service.

In answer to Question No. 2, I feel that our future needs could best be served by allowing

a) the use of the present voice network for international transmission of data and facsimile,

b) the interconnection of the international record carriers with the DDD network for this transmission, and

c) the interconnection of the international record carriers with specialized or privately owned networks for this transmission.

You have my permission to reference my views in your response to the FCC.

Very truly yours,

THE FOXBORO COMPANY

Jerome R. Satkus

Jerome R. Satkus, Manager
Communications Services

caf

FOXBORO

Systems and Data Processing
ALLIED CHEMICAL CORPORATION
Columbia Road, Box 1039R, Morristown, New Jersey 07960 (201) 538-8000

September 8, 1972

Xerox Corporation
Xerox Square
Rochester, New York 14603

Attention: Mr. David Klein
Manager, Graphic Communications Products

Dear Mr. Klein:

We concur with your companies feelings regarding the use of the switched telephone network for overseas transmission of data signals and facsimile.

While Allied Chemical Corporations use of the switched telephone network for these purposes is not urgent, we can see a future requirement for this ability.

The need for this service can best be met by use of the voice network and interconnection of the international record carriers with the D. D. D. network.

You may use our views as set forth above in preparing your response to the F.C.C.

Very truly yours,

ALLIED CHEMICAL CORPORATION

R. H. Lockwood

R. H. Lockwood
Communications Planning

RHL:np

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BOEING COMPUTER SERVICES, INC. P.O. BOX 24346 SEATTLE, WASHINGTON 98124

Mr. David Klein
Manager, Graphic Communications
Products
Xerox Corporation
Rochester, New York 14644

September 6, 1972

Dear Mr. Klein:

Thank you for your August 31 inquiry relative to the use of international telephone facilities for transmission of facsimile and data.

I can conceive of no valid technical reason why international facilities should be treated differently from our domestic or U.S./Canada facilities. FCC regulation of the use of the facilities under its jurisdictional control can also provide fully adequate protection of the international facilities and that would seem to be the main point of concern.

Certainly none of us that depend heavily on facsimile for our day-to-day domestic record communication should be reluctant to state rather categorically that in the future this same convenience should be available in our international operations. In a similar vein, those of us engaged in computer service operations can see no legitimate technical reason for not extending our 'dial-up' teleprocessing services beyond our national borders. In a small degree, at least, our planning for international data transmission has already been limited by the current restrictions, since initial low volume usage is most economically handled on dial-up facilities prior to a commitment for dedicated lines.

I trust you will find this "opinion information" helpful. There is no objection to your referencing this reply in your response to the Commission.

Sincerely,

Dean G. Roath, Manager
Telecommunications

Los Angeles Times

September 7, 1972

Mr. David Klein, Manager
Graphic Communications Products
Xerox Corporation
Xerox Square
Rochester, New York 14603

Dear Mr. Klein:

The Los Angeles Times has news reporters assigned to 25 foreign bureaus around the world. These people, along with our other corporate operations outside the United States, certainly would benefit from the opening up of international transmission of facsimile to the domestic DDD network.

The absolute integrity of message content inherent in facsimile vs. teletype for news reporting is a very important proven point to the Los Angeles Times. We intend to use this type transmission as soon as it becomes permissible.

Very truly yours,

Robert D. Hynes
Telecommunications Manager

RDH:nw
cc: William Thomas, Editor

TIMES MIRROR SQUARE/LOS ANGELES, CALIFORNIA 90053/TELEPHONE (213) 625-2345

Los Angeles Times

September 7, 1972

Federal Communications Commission
Washington
District of Columbia

Gentlemen:

Re: International Facsimile

The Los Angeles Times would like to use facsimile transmission from and to foreign countries via the international voice services and the AT&T switched telephone network.

We have found over the past two years of transmitting news reports from a great many locations in the United States that the speed and integrity of facsimile is far superior to any other type of message movement. The combination of voice for special instructions and the verified receipt of "as written" news reports provide The Times with a domestic reporting system which should be available worldwide.

We hope your current inquiry into this subject proves favorable.

Very truly yours,

Robert D. Hynes
Telecommunications Manager

RDH:nw
cc: Mr. Daniel Klein, Xerox Corporation
William Thomas, Editor, Los Angeles Times

TIMES MIRROR SQUARE/LOS ANGELES, CALIFORNIA 90053/TELEPHONE (213) 625-2345

AIRCO

150 EAST 42 STREET, NEW YORK, N.Y. 10017 • TELEPHONE: 212-682-6700

September 6, 1972

Mr. David Klein
Manager, Graphic Communications Products
Xerox Corporation
Xerox Square
Rochester, New York 14644

Dear Mr. Klein:

This letter is in answer to your letter dated August 31, 1972.

We do have a present need for international transmission of facsimile. Potentially, we would be transmitting facsimile to and from several foreign countries if the facilities were available. Our requirements are as such that we cannot utilize leased communications lines. Our requirements could best be served by the use of the present voice network for the international transmission of facsimile.

Yours truly,

Saul G. D'Ver
Senior Systems Analyst

SD/pb

cc: Mr. D. E. Borger

Eaton Corporation
Telecomputer Center
35599 Curtis Boulevard
Eastlake, Ohio 44094
Telephone (216) 523-5000

September 7, 1972

Xerox Corporation
Xerox Square
Rochester, N. Y. 14644

Attn: Mr. David Klein, Mgr.
Graphic Communications

Gentlemen:

In response to your August 31 letter, there is a definite and growing need for international transmission of facsimile and data within this company.

Eaton has or will have computer centers in the United Kingdom, Germany and Italy that should be linked to the Telecomputer Center here in Cleveland.

I suspect Eaton would want to use the combination of both voice network and the interconnection of the international record carriers with the DDD for this transmission.

Eaton has no objection to Xerox constructively using this information as part of its presentation to the FCC.

Yours very truly,

W. R. Leal
General Manager

cc:
Mr. Earl Kendle, Director
Information Systems

Teletype (810) 427-2605
Telex ([illegible]-431
Cable "EATONCORP"

BRANIFF INTERNATIONAL

September 5, 1972

Mr. David Klein
Manager, Graphic Communications Products
Xerox Corporation
Xerox Square
Rochester, New York, 14603

Dear Mr. Klein:

In reply to your memo dated August 31, 1972 our Company has a potential requirement for the International transmission of data between our headquarters in Dallas and principle stations in South America and Mexico. While we would contemplate using dedicated voice satellite channels for this purpose we can also foresee the use of the switched telephone network for this purpose especially to secondary stations where traffic volume is low.

For your information the primary reason why we have not embarked on data transmission to and from South America is the high cost of overseas dedicated voice channels which cost approximately $13,000.00 per month for 24 hundred bauds.

We trust that the foregoing will provide assistance to you.

Very truly yours,

John D. Heck
Director
International Communications

JDH;lj

A-49

TEXAS INSTRUMENTS
INCORPORATED
13500 NORTH CENTRAL EXPRESSWAY • DALLAS TEXAS
SERVICES GROUP

September 7, 1972

Mr. David Klein
Manager, Graphic Communications
Xerox
Xerox Square
Rochester, New York 14644

Dear Mr. Klein:

Texas Instruments has both a present and potential need for international switched network data transmission. We have a number (10-12) of locations which could economically utilize demand data transmission to the U. S. We are already using this type of capability within Europe where it serves to bridge the gap between no capability and the economic breakeven point for a leased AVD circuit.

Based on our experience with Datel and all of its problems we feel that direct connection via the voice network is the best and most efficient way. If this is accomplished by an automatic interconnect to an IRC in both directions then I have no objection to using an IRC. If the interconnect involves multiple parties and manual switching we will have gone no farther than we are now.

Very truly yours,

William E. Stafford

WES:ah

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MAILING ADDRESS POST OFFICE BOX 5621 • DALLAS, TEXAS 75222 • (214) 238-2011 • CABLE TEXINS

The New York Times
TIMES SQUARE NEW YORK N Y 10036

September 11, 1972

Mr. David Klein
Manager, Graphic Communications Products
Xerox Corporation
Xerox Square
Rochester, New York 14644

Dear Mr. Klein:

These are our views as requested in your recent letter:

1. Present or potential need for international transmission of facsimile and data:

   Yes. Substantial. 20,000 or more words daily from international points. This figure could again be substantially higher if certain techniques we are experimenting with show a pay-back.

2. Best way to serve the need:

   (c) Both of the above.

We have no objection to referencing our views in your response to the FCC.

Very truly yours,

D. B. Smith
Communications Director

DBS/p
cc: The N. Y. Times
Messrs. Martin
Stanton
Werner

UNITED CALIFORNIA BANK

600 SOUTH SPRING STREET • LOS ANGELES, CALIFORNIA • 213/624-0111
MAILING ADDRESS: BOX 3666 • LOS ANGELES, CALIFORNIA 90051

Mr. D. Klein
Manager, Graphic Communications
Products
Xerox Corporation
Xerox Square
Rochester, New York 14603

September 11, 1972

Dear Mr. Klein:

The following information is supplied as requested in your letter of August 31, 1972 about international transmission of facsimile and data.

(1) There is a present need for international transmission of facsimile and data within United California Bank particularly with regard to our branches in London and Tokyo. As our international banking services increase this need will also increase.

(2) The need could probably be best served by both of the alternatives mentioned in your letter.

With regard to the future, I would imagine that if this service became available we would still view it with a critical eye, especially with regard to cost and quality.

You may certainly reference our views in your response to the FCC.

Sincerely yours,

Geoffrey B. Marsh
Assistant Vice President
Telecommunications Systems Department

GBM:ah

Copies served upon:

American Telephone & Telegraph Co.
32 Avenue of the Americas
New York, New York 10013

Communications Satellite Corporation
950 L'Enfant Plaza, S. W.
Washington, D. C. 20024

French Cable Company
25 Broad Street
New York, New York 10004

Hawaiian Telephone Company
P. O. Box 2200
Honolulu, Hawaii 96805

Puerto Rico Telephone Co.
Virgin Islands Telephone Co.
c/o Edwin A. Kilburn, Esq.
International Tel. & Tel.
320 Park Avenue
New York, New York 10022

All America Cables & Radio
ITT World Communications Inc.
ITT World Communications Inc.-Virgin Islands
c/o Joseph J. Jacobs, Esq.
International Tel. & Tel.
60 Broad Street
New York, New York 10004

RCA Alaska Communications Inc.
629 E Street
Ankorage, Alaska 99501

RCA Global Communications, Inc.
60 Broad Street
New York, New York 10004

Tropical Radio Telegraph Company
Prudential Center
Boston, Massachusetts 02199

United States Independent Telephone Association
1801 K Street, N. W.
Washington, D. C. 20006

Western Union International
1 WUI Plaza
New York, New York 10004

The Western Union Telegraph Company
60 Hudson Street
New York, New York 10003

ORIGINAL
FILE

THE FRENCH TELEGRAPH CABLE COMPANY

(COMPAGNIE FRANÇAISE DES CABLES TÉLÉGRAPHIQUES)
ESTABLISHED IN THE UNITED STATES SINCE 1879

BROAD STREET
YORK, N. Y. 10004
PHONE 212-747-5660

THE "VIA FRENCH" ROUTE
J. A. BERENGER, MANAGER

RECEIVED BY FCC
MAIL BRANCH ON
NOV 22 1972

November 20, 1972

Mr. Ben F. WAPLE
Secretary
Federal Communications Commission
Washington, D. C. - 20554

2.30-2
List D
C/C
Inquiry
11-20-72

Docket No. 19558: Inquiry into policy to be followed in future authorization of overseas Dataphone service.

Dear Mr. Waple:

This is in reference to the above captioned Docket No. 19558 and will serve as French Cable's reply to the Commission's Notice of Inquiry in the matter adopted July 26 and released July 31, 1972.

French Cable is not in a position to respond to this inquiry as it does not possess, nor can it obtain, any of the information required. Nevertheless we will abide by and implement all policy determinations which the Commission may make in the matter of overseas Dataphone service.

Very truly yours,

J A Berenger

J. A. Berenger

JAB/jw

Encl. 14 copies

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19558.57

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service	)))	Docket No. 19558

COMMENTS OF COMMUNICATIONS SATELLITE CORPORATION

Communications Satellite Corporation (Comsat) hereby submits its comments in response to the Commission's Notice of Inquiry in the above captioned matter released on July 31, 1972.

1. In paragraph 9 (c) of its Notice of Inquiry, the Commission requested comments on the "technical and operational feasibility of providing dataphone or an equivalent service via satellite, including the availability and cost of error detection and correction equipment."

2. Comsat has performed extensive tests to determine the quality of satellite circuits from earth station to earth station. Measurements have been made of all circuit characteristics known to affect data transmission. Direct error rate measurements for channels consisting of modems

and the satellite circuits have also been made. The results of these tests have been, and continue to be, made available to the international community through the CCITT.

Summaries of the results of some recent tests over voiceband and groupband circuits are shown in Tables 1 and 2, attached. The voiceband tests achieved an average Bit Error Rate of 5×10^{-7} over loops from the Etam, Cayey, Andover, and Jamesburg earth stations. The groupband tests were performed on a Jamesburg to Paumalu double-hop-loop, with an average bit error rate of 1×10^{-8}. The measured error rates, phase jitter and impulse noise performance are excellent by terrestrial standards.

3. Some error control systems which are normally referred to as start-stop or positive acknowledgement systems may provide poor transfer efficiency when used over satellite circuits. Transfer efficiency will be poor if data blocks are used which are short compared to the transmission delay. This is the basis of assertions which have been made concerning the practicality of using satellite circuits for data transmission. Since

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such systems transmit one block of data and then wait for an acknowledgement that this block has been correctly received, transfer efficiency is poor. It should be noted however that such systems do work over satellite circuits and that transfer efficiency is a function of block length.

4. The CCITT has taken note of the transfer efficiency problems of the start-stop ARQ system (which is actually quite inefficient on some terrestrial lines when short blocks are used), and has recommended an improved error control system. This system is described in CCITT Recommendation V41. The V41 system is known as a "go-back-2" ARQ system. When there are no errors, data is transmitted with no stop or wait between blocks. Transfer efficiency is thus very high. When an error does occur, the transmitter completes the current block and then goes back two blocks and repeats. The block length must be long enough to allow for the round trip transmission time. In the V41 recommendation as it now exists, the maximum block length is 980 bits and satellite operation is limited to 1200 bps. However, an amendment to V41, which is expected to

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be formally adopted by the CCITT at the Fall 1972 session, will add a block of 3860 bits in length. This will permit operation of the V41 system over satellite circuits at data rates up to 4800 bps.

5. A somewhat more advanced error control system has been developed which measures the loop delay of the circuit during its initial synchronization procedure. The number of data blocks (N) which must be repeated after each error is then adjusted to the minimum required for the particular circuit. This system provides slightly higher transfer efficiency than the go-back-2 system and is particularly well suited to applications which may use satellite and terrestrial circuits alternately. A commercially available adaptive go-back-N system is described in paragraph 8 of this paper.

6. Forward acting error control (FAEC) is also quite effective when employed on a circuit of the high quality obtained by satellite circuits. This technique can be used to improve the circuit bit error rate by several orders of magnitude relative to the performance achieved

without error correction systems. The transmission delay is of no consequence in the FAEC operation. For the application where the poisitive assurance of an ARQ system is felt to be necessary, forward acting error control can be combined with the go-back-2 or go-back-N systems described above. In such a combined system, the number of repeats required can be reduced substantially with resulting improvement in transfer efficiency.

7. With respect to the availability of error control equipment, Marconi Co. of the U.K. offers a complete line of go-back-2 type equipment under the trade name Marconidata. Series H6010 and H6020 Data Terminals with error control are provided for operation on cable or synchronous satellite circuits. Series H6010 Transmit and H6011 receive terminals with integral paper tape reader and punch operate at speeds up to 1200 bps. Marconi's price for this equipment is approximately $9500. The series H6020 Transmit and H6021 Receive terminals with plug in paper tape reader and punch operate at speeds up to 4800 bps. This equipment is priced at about $11,000. The H6020-H6021 equipment is also available with magnetic tape deck or line printer at 400 lines per minute. Data modems are not included in these prices. The equipment is designed to work with

modems conforming to CCITT Recommendations. All terminals are capable of operating in the automatic unattended answering mode. Equipment of the H6020-H6021 series is operating on satellite circuits from London to Hong Kong and Birmingham to Montreal. Equipment of the H6010-H6011 Series is operating on a satellite circuit from London to Ottawa.

8. AEG-Telefunken of West Germany offers a Data Station of the adaptive go-back-N type, operating at 1200 bits/second. This equipment consists of the following;

2 Data External Control Units	DFS 321-5
2 Data Modems	DM 1200-6
1 Paper Tape Punch	LSL 040-6
1 Paper Tape Reader	LSS 150-3

for approximately $44,000. This data station can also be connected to a card punch and reader, line printer, plotter, or magnetic tape unit.

9. A number of companies in the U.S. and abroad are actively involved in the development of improved error control systems which will be suitable for use on satellite circuits. Comsat, as a part of its INTELSAT R&D program

is currently developing a V41 ARQ system in accordance with the revised V41 Recommendation expected to be adopted by the CCITT this fall. This work will be followed by the development of an improved error control system intended to provide higher transfer efficiency even under conditions of high error rate. While current Comsat effort is primarily directed toward hardware implementation of error control equipment with a view toward eventual LSI implementation, it should be noted that all of the error control schemes now under consideration can be implemented in software. Error control can be performed in a separate miniprocessor devoted entirely to this task or added to the tasks of an existing processor. Both LSI and software approaches can be expected to result in lower terminal costs in the future.

10. In addition to the conventional method for data transmission over analog satellite facilities, Comsat is introducing digital data service which will become operational this year. These new services are SPADE and Single-Channel-Per-Carrier (SCPC), which provide for voice channel and high speed data transmission. Each voice channel is transmitted in digital form at the rate of 64 kbps. Proposed Comsat Data Service Offerings will provide

48.0, 50.0, or 56.0 kbps channels using the transmission capacity of one voice channel. In addition, the inherent flexibility of the SPADE network will make possible multi-destinational or broadcast services for facsimile and data.

11. In summary, Comsat asserts that satellite circuits provided by INTELSAT satellites and earth stations owned by Comsat and other INTELSAT members are suitable for all forms of data transmission currently in use on terrestrial circuits, including dataphone. Some error control systems, such as the start-stop ARQ system, are not compatible with satellite transmission. These error control schemes are not a part of the dataphone but are a part of the users' terminal equipment. New forms of error control equipment which provide more efficient transmission are available now while even better systems are under development.

12. In paragraph 9(e) of its Notice of Inquiry, the Commission requested comments on "whether the international record carriers should be authorized to provide overseas dataphone or an equivalent service...." Comsat believes that all conditions ought to be removed which could act as barriers to international commerce. To this end, Comsat

believes that both American Telephone & Telegraph Company (AT&T) and the international record carriers ought to be allowed to provide this service provided that AT&T be required to interconnect as necessary with the record carriers. This would make available to the public in the most efficient way the benefits to be derived from dataphone types of service.

Respectfully submitted,

COMMUNICATIONS SATELLITE CORPORATION

By Wilbur L. Pritchard

Wilbur L. Pritchard
Vice President & Director, Comsat Labs

950 L'Enfant Plaza, S.W.
Washington, D. C. 20024

Denis J. Brion
Its Attorney

November 29, 1972

Table 1

Results of Voiceband Data Tests over INTELSAT III Satellite Links

Data Speed	4800 bits/sec
Modulation Technique	8 phase PSK
Duration of Tests	150 hours
Average Bit Error Rate	5×10^{-7}
Phase Jitter	less than 1.0 degree peak-to-peak less than 0.3 degree average
Impulse Noise	less than 2 counts in 15 minutes exceeding -21 dBmO (1/9 of the allowable counts in CCITT V.55)
Envelope Delay Distortion	less than 300 usec, 1000-2600 Hz (meets CCITT Rec. M102 and specs of C4 conditioned line)

Table 2

Results of Groupband Data Test Over
AN INTELSAT III Satellite Link

Data Speed	50 kilobits/sec
Modulation Technique	Vestigal Sideband AM
Duration of Test	12 hours
Average Bit Error Rate	1×10^{-8}
Impulse Noise	less than one count per minute exceeding -11 dBmO
Envelope Delay Distortion	less than 10 usec, 64-105 kHz (meets CCITT Rec. H.14)

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of	)	
	)	
Inquiry into Policy to be Followed in Future Authorization of Overseas Dataphone Service	)	Docket No. 19558

COMMENTS
Of The
CENTRAL COMMITTEE ON COMMUNICATION FACILITIES
Of The
AMERICAN PETROLEUM INSTITUTE

The Central Committee on Communication Facilities of the American Petroleum Institute, sometimes hereinafter referred to as the "Central Committee," pursuant to the invitation extended by the Federal Communications Commission in its Notice of Inquiry adopted in the above-styled matter on July 26, 1972,[1/] by its attorneys, respectfully submits its Comments concerning the provision of dataphone or an equivalent service between the United States and points overseas.

PRELIMINARY STATEMENT

1. The Central Committee is one of the standing committees of the Division of Transportation of the American Petroleum Institute, whose headquarters are in

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1/ FCC 72-673 (79948), released July 31, 1972. On September 26, 1972 the Commission, by the Chief, Common Carrier Bureau, extended until November 29, 1972 and December 29, 1972 the time for filing Comments and Reply Comments, respectively.

Washington, D.C. Members of this Central Committee represent over 40 of the leading oil and natural gas companies in the United States. The Central Committee is, in turn, supported and sustained by more than 400 petroleum industry communication users. Many of these communication users have been faced with international communication requirements for years and the number of companies with international interest continues to grow as the search for new energy sources expands around the globe. Inasmuch as these international communication needs relate to requirements in both voice and data modes, the Central Committee has found encouraging the initiation of the proceeding looking toward a resolution of those questions related to overseas dataphone services.

2. This proceeding appears to have been initiated by, among other events, the request of Xerox Corporation asking the Commission to give consideration to the removal of existing limitations which restrict the public's use of the domestic switched telephone network for the overseas transmission of data and facsimile signals alternatively with voice traffic. More particularly, the responses the Commission received from inquiries directed to American Telephone and Telegraph Company (AT&T) and several international record carriers

highlight the difficulty faced by subscribers in obtaining efficient overseas facsimile service on channels used alternatively for voice messages. The specific inquiries posed by the Commission in paragraph 9 of its Notice of Inquiry are directed primarily to AT&T and the international record carriers. At the same time, however, those questions posed in subparagraphs (f), (h), and (i) do lend themselves to comment by existing and potential subscribers. The Central Committee is therefore pleased to have this opportunity to provide the Commission with its views concerning the provision of overseas dataphone or equivalent services.

COMMENTS

3. Domestic tariffs now permit the use of equipment with the message toll network which has provided many subscribers with an efficient and attractive means of transmitting over long distances data and facsimile traffic directly from the point of origin to the intended receiver. In light of the existing technologies, there appears to be no reason why this same type of alternative voice, facsimile and data service should not be made available for those having international communication requirements. One of the most obvious needs for this type of transmission in the petroleum industry is the reliable transmission of seismic and drilling information from the

field to those facilities equipped for proper analysis of those findings.

4. Unfortunately, users with international communication requirements are faced with transmission delays and dubious reliability in overseas data transmissions because of the requirement for retransmission of copy. Improved efficiency and reliability, and obvious convenience, could be secured with direct service provided through interconnected facilities or by a single carrier.

5. The public interest may best be served by the provision of these services from alternative sources. Thus, users should be able to secure (1) direct service through the domestic carrier's, local and overseas facilities, or (2) interconnected service via a domestic carrier and an international carrier of record. It is essential, however, that the facilities to be provided by the carriers be established on a compatible basis. If necessary, appropriate operating procedures and standards should be established to assure the availability of competitive, compatible alternatives.

6. As indicated, there is an existing need for using international circuits in alternative modes for both voice, and data or facsimile transmissions. There appearing to be no substantive technical reasons preventing the provision of such services, the Central Committee

urges the Commission to promptly resolve those regulatory issues requiring disposition for the provision of competitive and compatible facilities for overseas dataphone or equivalent services.

Respectfully submitted,

CENTRAL COMMITTEE On
COMMUNICATION FACILITIES Of The
AMERICAN PETROLEUM INSTITUTE

By _____
Joseph E. Keller

By _____
Wayne V. Black

Its Attorneys

Keller and Heckman
Suite 1000
1150 17th Street, N.W.
Washington, D.C. 20036

Telephone: 296-2700

DATED: November 29, 1972

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CERTIFICATE OF SERVICE

I, Renee Lebkicker, a secretary in the Law Offices of Keller and Heckman, do hereby certify that copies of the foregoing Comments of the Central Committee on Communication Facilities of the American Petroleum Institute filed in Docket No. 19558 were this 29th day of November, 1972 sent by First Class, United States Mail to all parties listed in Paragraph 10 of the Federal Communications Commission's Notice of Inquiry instituting said proceeding.

Renee Lebkicker

Renee Lebkicker

BEFORE THE

Federal Communications Commission

WASHINGTON, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)))	Docket No. 19558

To: The Commission

COMMENTS OF THE COMPUTER AND BUSINESS EQUIPMENT MANUFACTURERS ASSOCIATION

By Notice of Inquiry released July 31, 1972 (FCC 72-673), the Commission invited the submission of information, views and recommendations by all interested parties with respect to the captioned matter. The Computer and Business Equipment Manufacturers Association (hereinafter "CBEMA") 1/ submits herewith its comments on the subject matter of the inquiry.

Preliminary Statement

1. Initially, it should be noted that CBEMA is a trade association whose membership consists of a broad cross-section of the computer and business equipment manufacturing fields. The Data Processing Group, a major group within CBEMA, consists of large and small companies identified with the manufacture of computers and such related equipment as terminal and peripheral devices

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1/ The name of the association was changed from Business Equipment Manufacturers Association to Computer and Business Equipment Manufacturers Association by action of the Executive Board on October 21, 1972.

used in the data processing field.[2/] In addition, many of those organizations are involved, directly or through subsidiary organizations, in the provision of data processing services. CBEMA has been an active participant in a variety of Commission proceedings, and has filed comments in a number of rulemaking dockets which have involved the interrelationship of communications and computer-related services.

2. In its July 31, 1972 Notice of Inquiry herein, the Commission invited comments on the possibility of removing existing limitations on the public's use of the switched telephone network for the overseas transmission of data and facsimile signals alternately with voice. As described by the Commission, the fundamental matters to be determined are "whether or not dataphone or a similar service should be authorized to new overseas points, and which carrier, or carriers, should be authorized to provide the service." (Notice ¶9.)

3. CBEMA is fully aware that the determinations to be made in this proceeding involve significant policy considerations. Deciding the nature of the services to be permitted, as well as the number and identity of the carriers authorized to furnish such services, entail an intricate balancing of carrier interests, U. S.

2/ Membership of the Data Processing Group includes Addressograph Multigraph Corp.; Burroughs Corp.; Computer Machinery Corp.; Control Data Corp.; Data Products Corp.; General Electric Co., Information Services Business Div.; Honeywell Information Systems, Inc.; IBM Corp.; Moore Business Forms, Inc.; Mosler; The National Cash Register Co.; Olivetti Corp. of America; Pitney-Bowes, Inc.; Singer Business Machines; Sperry Rand Corp.; The Standard Register Co.; TRW Data Systems; Tally Corp.; UARCO, Inc.; Wang Laboratories; Xerox Corp.

international concerns, and user benefits to be derived, to mention only a few. In its comments herein, CBEMA has not undertaken to address those questions bearing on carrier selection or international policy considerations. For those matters are ones particularly committed to the Commission's informed discretion.

4. Rather, CBEMA's comments are devoted to the need for international alternate voice/non-voice services, and to the significant user benefits which could be realized by the availability of such services. As to those policy areas to which we have not addressed ourselves, CBEMA urges that the ultimate framework fashioned by the Commission be one in which users are granted the greatest flexibility possible in their choice and potential uses of the services authorized.

5. More particularly, and as reflected in its specific comments hereinafter, CBEMA urges the adoption of appropriate Commission policies which will provide users the broadest possible availability of an on-demand message service for international alternate voice and non-voice use. While the Commission's Notice has referred to AT&T's "Data-phone" 3/ offering as the type of service here being considered, CBEMA has employed a more generic definition of the service in its discussion herein -- one which connotes an efficient utilization of communication networks which combines demand switching, international direct distance dialing, and the availability of sufficient bandwidth for voice communications or,

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3/ A registered trademark of AT&T.

alternatively, non-voice with the use of appropriate equipment, for facsimile, record and/or data transmission.

The Availability of Alternate Voice/Non-Voice Services Would Eliminate Many of the Present Obstacles to Expanded International Business Communications.

6. A number of services are presently provided by international communications carriers for voice and non-voice use. Message services publicly available on demand include message telephone service (voice), telex (non-voice), DATEL (non-voice) and message telegraph service (non-voice).[4/] At the same time, various services on a privately leased basis are also available, including leased telegraph channels (non-voice), program transmission (voice/non-voice), facsimile including photo (non-voice), alternate voice/record (voice/non-voice) and private line (voice or non-voice).

7. Predictably, international telecommunications service users tend to employ those services most suited to their individual needs. While there is considerable overlap, users appear to fall into four generally discernible classes, depending on the quantitative demand involved. Large users employ all available services in varying degrees, but generally rely most heavily on leased voice/non-voice facilities to serve high-volume points for voice and non-

4/ DATEL service is primarily available only in international gateway cities. As a consequence, private line service is required by subscribers outside gateway cities for connection to the DATEL service.

voice purposes. Medium users likewise employ all available services, but usually tend to rely on leased telegraph and telex (non-voice) facilities to service high-volume points. Small users normally employ telex and other message-oriented services. And sporadic users usually depend most heavily on U. S. Postal Service facilities or the on-demand services available from the international carriers. The economics of the situation tend substantially to favor the large user, with costs per unit of information decreasing as the class of user increases in size.

8. At the present time, while users have available a wide spectrum of telecommunications services for both voice and non-voice use domestically, similar flexibility in the international area is absent. And in virtually all of the "classes" referred to, the unavailability of international voice/non-voice services presents unnecessary problems which could be rectified readily by appropriate Commission action.

9. An example in the "large user" class can be drawn by reference to a hypothetical large, multi-national firm having production and sales forces deployed internationally, and which uses a large data processing system to manage its operations, including such in-house functions as sales inventory control records, production schedules and financial control systems. Private leased facilities are used internationally to link the international operations. Locations whose traffic does not warrant leased private lines, must resort to other communications services which are

considerably more expensive per unit of information transmitted compared to similar costs of an efficiently used leased service, and which may not be technically compatible with its data processing system.

10. In the instance of this large user, the availability of an on-demand alternative voice/non-voice capability would provide a number of significant advantages. It would, for example, provide a message service similar in characteristics to leased voice/non-voice services and thus improve technical compatibility for the data processing systems. In addition, and depending on foreign carrier facility capabilities, it would permit direct access, on both a voice and non-voice basis, through the switched network, to outlying areas not served by leased facilities. Moreover, since timeliness of information in a multi-national firm is frequently of utmost importance, an on-demand alternate voice/non-voice international service would provide a means of meeting peak load requirements which exceed the capacity of the leased line network, and thus help in meeting the timeliness requirement. The alternative voice/non-voice international service would also serve as a back-up for the privately leased channels in the event of a temporary service interruption.

11. Users in other "size classes," confronting similar problems, would realize like advantages. Envision, for example, a medium to smaller size construction firm, and its communications requirements for bidding on a dam in Venezuela:

Pictorial Requirements

The firm must have topographic layouts, aerial photos, weather maps, water navigation charts, etc. on an up-dated basis. Most of this information would be available in Venezuela, but would be needed in the home office for preparation of the bid.

Computer Requirements

Computer access would be needed to enable the engineers making the preliminary survey to make stress analysis, soil bearing strength analysis, modeling of pressure analysis.

Voice Requirement

Voice communications would, of course, be essential to enable both the home office and the field engineers to exchange the latest changes in the bidding process, to discuss the latest technical changes in blueprints and test boring requirements, etc.

12. To meet these needs under present tariffs, at least two separate international services would be needed. Indeed, there is no economic message service for overseas facsimile transmission. By contrast, the on-demand voice/non-voice service would be able to meet all these requirements in a single offering.

13. Analogous advantages could be realized by sporadic users of international telecommunications services. An example might be two international lawyers, one located in Chicago, the other located in Tokyo, Japan, negotiating the terms, conditions and amendments to a specific contract for their respective clients. While the contract is only ten pages, due to natural language barriers, translation errors, particular legal considerations in one or the other countries, or a specific tax consideration,

three clauses have to be rewritten and agreed upon within a two-day period -- a process which entails both the exchange of documentary materials and contemporaneous discussion. If our two lawyers were to go to the carriers with this requirement, they would have to subscribe to at least two different services -- one for facsimile (or some other "hard copy" service) and one for voice -- and would confront significant impediments to having final copies of the agreement in hand by the two-day deadline. The on-demand alternative voice/non-voice services offering, however, would facilitate measurably completion of the work.

Implementation of an International Voice/Non-Voice Capability Would Be of Substantial Benefit, and Would Increase the Efficiency of Currently Available Facilities.

14. The examples above illustrate the wide-ranging types of situations and users which would benefit substantially from the on-demand alternate voice/non-voice service offering. Its availability will serve to eliminate present artificial and unnecessary restrictions which make some types of modern-day business communications difficult, if not altogether impractical. As in the domestic sphere, the telecommunications needs of the international user can be met best by permitting the provision of services designed to meet the user's particularized needs. Moreover the user's choice from among available facilities in seeking to meet those needs should be broadened.

15. The alternate voice/non-voice service contemplated in this proceeding but not presently available should be transparent

as to use (voice or non-voice), and cost should relate only to the facility, not to the use made of the facility. The facility and through connections to the user's ultimate destination should be available on a dial-up basis. This broadened capability would permit the user -- without regard to his size -- to make better, more economical and expanded use of international telecommunications facilities. Moreover, the on-demand alternate voice/non-voice service contemplated here would provide an added dimension to the communications field, inasmuch as a service offering of that type in the international field of business and commerce would assist in overcoming many of the natural stumbling blocks to effective international communications generally.

16. The implementing of an international alternate voice/non-voice would appear to hold significant advantages from the carriers' standpoint as well. It is true, of course, that a forecast of the market for such a service cannot be made with the precision expected of forecasting a similar service offering domestically. The problem lies, in part, on such external variables as the differing attitudes of many of our international carriers' foreign correspondents concerning the grade of service to be provided, the possible inadequacy of facilities for completing a call beyond the foreign gateway, and the time differences between continental areas which create short peak periods when business hours overlap.

17. We can, however, point out that when international direct distance dialing (IDDD) was introduced, several changes occurred: message volumes increased dramatically; the grade of service improved; the busy period was extended due to more social calling; average operator work time was reduced (since fewer calls required operator assistance); and conversation time per call was reduced.[5/] Domestically, the introduction of Data-phone service has resulted in an increase in voice traffic overall. And it is not unreasonable to expect that there will be a similar dramatic increase in similar international services when they become available.[6/]

Conclusion

18. It is CBEMA's position, therefore, that the Commission should permit the provision of on-demand alternate voice/non-voice telecommunications service on a directly dialed message basis. We can find no technical or operating aspects, including the provision of error detecting and error correcting techniques,[7/] which cannot be utilized effectively and economically on both cable and

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5/ See, for example, the transcript of the informal conference on transatlantic communications, Docket No. 18875, held June 17, 1971, at pp. 4, 80.

6/ See, e.g., id. at pp. 32, 33-34, 46-47, 70-71, 85.

7/ Error detection and correction techniques could enhance the proposed service offering to the customer, but it is our opinion that this part of the offering should be on an optional basis. The user of this proposed service should be able either to employ his own equipment or methods to accomplish this purpose, or to receive it from the carriers if offered.

satellite facilities. As noted earlier, we recognize that problems exist in the development of methods for equitable treatment among the international carriers. In addition, there are problems in providing through dial access from the domestic telephone network, and that capability may be more difficult in the hinterlands than in the gateway cities. Problems also exist in the area of negotiations with carriers' foreign correspondents. However, in CBEMA's view, the benefits to be derived from the availability of such services seem to far outweigh the sum total of all the potential problems. Early, favorable action by the Commission is fully warranted.

Respectfully submitted,

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November 29, 1972

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas dataphone service.	))))	Docket No. 19558

COMMENTS OF
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Dated: January 12, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas dataphone service.	)))	Docket No. 19558

COMMENTS OF ITT WORLD COMMUNICATIONS INC.

ITT World Communications Inc. (hereinafter ITT Worldcom) 1/ hereby makes the following Comments in response to the Commission's Notice of Inquiry (Notice) in the captioned matter, released July 31, 1972.

ITT Worldcom believes that if the rendition of overseas dataphone services is not reserved to the international record carriers, American Telephone & Telegraph Company (AT&T) would soon dominate or monopolize the relevant market. In support of this conclusion, ITT Worldcom's comments are divided into two parts. Part I deals with the paramount issue in this Inquiry -- whether AT&T should be permitted to use the "public switched telephone network for the overseas transmission of data and facsimile alternately with voice communications." 2/ Part II deals with other questions raised by the Commission concerning the nature, extent and future of the overseas dataphone market.

1/ Although these comments are filed on behalf of ITT Worldcom, they also represent the views of All America Cables & Radio, Inc., and ITT Communications Inc. - Virgin Islands.

2/ Question (d) in Notice, at p. 5.

PART I

Question (d) "Whether the restrictions set forth in the facility authorizations issued to AT&T and in the message toll telephone tariffs of AT&T implementing such authorizations should be removed to permit use of public switched telephone network for the overseas transmission of data and facsimile alternately with voice communications;..."

ITT Worldcom's Response

AT&T should not be permitted to furnish international dataphone service because:

(1) AT&T has repeatedly assured the Commission of its intention to stay out of the international record field, and the international record carriers have relied on such representations.

(2) AT&T could use its potentially overwhelming competitive advantages to dominate international dataphone service, and to preclude effective competition by the international record carriers. Such competitive advantages would be based on:

(a) AT&T's domination of the domestic switched service network;

(b) AT&T's virtual monopoly of existing dataphone services;

(c) AT&T's exclusive franchise for handling voice services to and from the U.S. Mainland; 3/

3/ Except for the limited authority to furnish leased channel voice services between the U.S. Mainland and Hawaii recently granted RCA Global Communications, Inc., Memorandum Opinion and Order, FCC 72-998, released November 13, 1972.

(d) AT&T's huge nationwide sales force; and

(e) AT&T's ability to cross-subsidize its international dataphone operations from its monopoly services.

(3) Domination by AT&T of international dataphone service would seriously impair the continued viability of the international record carriers, since it would result in a massive diversion of revenues from other overseas record services. (See response to Question (h) in Part II.)

AT&T's Representations

On June 17, 1971, Xerox Corporation wrote a letter to the Commission in which it requested that the Commission give consideration to removing the "limitations currently imposed upon the international transmission of data and facsimile signals." The Commission subsequently requested comments from AT&T and the international record carriers on the Xerox proposal. AT&T responded on July 29, 1971, stating that "AT&T takes a favorable view of the permissive use of its overseas network for the transmission of such signals and plans to file appropriate applications and tariff revisions with the Commission as soon as may be practicable."

However, prior thereto, AT&T had long taken the position that it had no desire to furnish international record communications. For example, in opposing the demand made by the international record carriers that AT&T's authorizations for the Hawaii I Cable contain a specific prohibition against the furnishing of record services, AT&T reassuringly declared:

"In its letter of November 20, 1953 to the Commission

on this subject the American Company said:

> ' The American Telephone & Telegraph Company has no thought of entering the field of international telegraph communications... We have written at some length regarding this matter because we deem it important for the Commission to know fully our position and emphasize that we have no desire to enter the field of international telegraph communications.' " 4/

On the basis of AT&T's "representations," the Commission granted the Hawaii I Cable authorizations without the restriction requested by the international record carriers. (Commissioner Robert E. Lee dissented stating: "...I cannot concur in the majority action whereby American Telephone & Telegraph Company is permitted to construct and operate the cable without restriction in the use of such facilities for telegraph service.") 5/

Again, in the TAT-4 Case, in discussing the right of AT&T to use the proposed facilities for furnishing private line alternate voice/data services the Commission said:

> "It is to be noted that AT&T has stated several times in the past that it has no interest in entering the overseas telegraph field." 6/

AT&T was still singing the "song of the siren" 7/ when the Commission

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4/ Opposition of AT&T to the Petitions of RCA Communications, Inc. and Globe Wireless Ltd. for Rehearing, dated October 19, 1955, pp. 4-5 (FCC File Nos. P-C-3630 and S-C-L-14).

5/ Memorandum Opinion and Order, FCC 55-1128 (File Nos. P-C-3630 and S-C-L-14), released November 17, 1955.

6/ American Telephone & Telegraph Company, 37 F.C.C. 1151,1159 (1964).

7/ Chapman, Eastward Ho, Act V, sc. 1.

considered the question of whether AT&T would be permitted to furnish dataphone service to Hawaii. By that time its "representations" had blossomed into "unequivocal assurance." In A.T.&T. et al., Data-Phone, the Commission, in referring to the concern expressed by the international record carriers "that the provision by AT&T of telegraph service with Hawaii may be the first step in the entry of AT&T into the international record field," stated:

> "we had 'the unequivocal assurance of AT&T that it has no intention to enter into and in fact has a desire to stay out of the international record field'..." 8/

In this connection it should be noted that in 1955, when the Commission authorized AT&T and Hawaiian Telephone Co. to provide record services between Hawaii and the Mainland, it believed it was protecting the commercial viability of a new cable. But in November, 1972, the Commission concluded that "...the reason for permitting AT&T and Hawaiian to provide any type of record service no longer obtains." 9/

AT&T's Overwhelming Competitive Advantages

While the issue of whether AT&T is standing behind its "unequivocal assurance" is important, the key question is whether allowing AT&T to furnish such service, in view of its immense size, monopolistic position, and long history of anticompetitive practices would have such a deleterious effect on competition in this new and fast developing field that it would be contrary to the

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8/ A.T.&T. et al., Data-Phone, 38 F.C.C. 1222,1224 (1965).

9/ RCA Global Communications, Inc., Memorandum Opinion and Order, FCC 72-998, released November 13, 1972.

public interest.

Some idea of the vastness of the AT&T monolith is easily obtained by examination of its 1971 annual report which states that it had operating revenues of roughly 19 billion dollars,[10] and serves 100 million telephones -- 3,850,000 of which were added in 1971.[11] AT&T's total gross capital investment amounts to over 60 billion dollars.[12] AT&T's annual report proudly states that during 1971 it added new calling capacity to its local exchanges "sufficient to serve 12 cities the size of Denver,"[13] and "28,000,000 circuit miles"[14] to its network of transmission facilities. AT&T now employs directly over 1 million people[15] -- one out of every 200 people in the United States.[16] Certainly, the comparatively tiny international record carriers[17] with combined 1971 operating revenues of 206 million dollars, a gross capital investment in facilities of 387 million dollars, and a combined total of less than 7,000 employees, can not be expected to compete on anything approaching an equal basis with AT&T.

10/ AT&T 1971 Annual Report, p. 1.

11/ Ibid., p. 17.

12/ Ibid., p. 4.

13/ Ibid., p. 28.

14/ Ibid., p. 4.

15/ Ibid., p. 4.

16/ Ibid., p. 20.

17/ ITT Worldcom, RCA Global Communications, Inc., Western Union International, Inc., and TRT Telecommunications Corporation

If AT&T wishes to renege on its previous "unequivocal assurance," it is now precluded from doing so by the philosophy of the Commission's decision in the TAT-4 Case.[18] In that case, the Commission considered whether AT&T should be permitted to furnish international alternate voice/data leased channel service, because the international record carriers had expressed "understandable concern that AT&T with its vast nationwide domestic network and its large sales force...[was] in a position to obtain the lion's share, if not all of the business generated by this new service."[19] The Commission decided that

> "A realistic appraisal of the relative capabilities of AT&T and the record carriers to secure and maintain such business leads us to conclude that AT&T's entry into this service would seriously jeopardize the ability of the record carriers to obtain a meaningful share of the business. In this connection we note that the total overall revenues of the Bell System for 1963 were some $9.6 billion. Its revenues derived from its oversea services for that year were $65.5 million, or much less than 1 percent of its total revenues. The amount of such oversea revenues derived from record services is a small portion of this latter amount. Loss of the revenue derived from these record services would have an inconsequential impact on the overall revenue picture of the Bell System. The provision of oversea telegraph services is, however, for the most part, 100 percent

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18/ American Telephone & Telegraph Company, 37 F.C.C. 1151 (1964).

19/ Ibid., p. 1158.

> of the business of the international record carriers, and a significant loss in their participation in the telegraph business could have a serious effect on the viability of the international telegraph industry as a whole. This is a risk the record carriers should not be called upon to take, particularly in view of the fact that a substantial portion of this business will be diverted from existing overseas services. It is in the public interest that we assure the viability of the record carriers by protecting them from the losses they would inevitably suffer were AT&T permitted to provide this voice-record service." (emphasis added) 20/

The principles enunciated by the Commission in the TAT-4 Case have been followed in more recent cases involving the potential domination by AT&T of a new service. For example, in Section 214 Certificates (Docket No. 18509) dealing with the right of telephone companies to construct and operate CATV facilities the Commission said:

> "We believe that the public interest in modern and efficient means of communications will best be served, at this time, by preserving, to the extent practicable, a competitive environment... We are of the opinion that the preservation of such competition will best be assured by the exclusion of telephone companies in their service areas from engaging in the sale of CATV service to the viewing public except where no practical alternative exists to make such service available within a particular community.
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> "In view of the foregoing, it shall be our policy to bar all telephone common carriers from furnishing CATV service to the viewing public in their operating territory

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20/ American Telephone & Telegraph Co., 37 F.C.C. 1151,1159 (1964).

except when, for good cause shown, a waiver of this policy is granted." (emphasis added) 21/

If, AT&T is permitted to furnish international dataphone service one aspect of the overwhelming competitive advantages possessed by it, would be its ability to cross-subsidize the costs of this competitive service out of revenues derived from its monopoly services. Certainly, AT&T possesses the ability, by the simple expedient of arbitrarily allocating its costs among its monopoly MTTS and WATS services, domestic dataphone service, and international dataphone service to reduce the cost of the latter service in order to undercut its competitors.

The potential dangers of cross-subsidization in the field of international dataphone services would be far greater than they would be in the field of domestic private line services where limited protections have been afforded to the specialized carriers. Unfair competition between giant AT&T and the common carriers presently providing other vital record carrier services could destroy the viability of these carriers and their ability to provide other record services on which the public relies. With respect to private line services, however, the demise of a few domestic specialized carriers would not necessarily result in a serious loss of essential public services.

In view of the foregoing ITT Worldcom urges that the Commission answer the threshold question of whether AT&T should be permitted to provide international

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21/ Section 214 Certificates, 21 F.C.C. 2d, 307,325 (1970). See also Allocation of Frequencies in the 150.8 - 162 Mc/S Band (Docket No. 16778), 12 F.C.C. 2d 841,849 (1968), in which the Commission felt it necessary to impose restrictions on AT&T and other wireline carriers "to prevent unfair competitive practices" in the one-way signaling field.

dataphone service in the negative. This developing service should remain and be treated as a record service which should be rendered by international record carriers only.

PART II

Question: (a) "The nature and extent of the current and expected public demand for dataphone or an equivalent service between the U.S. and overseas points, quantified in terms of messages and minutes, and the factors underlying such estimates."

ITT Worldcom's Response

ITT Worldcom does not presently have an international dataphone service of the kind contemplated by the subject Notice. ITT Worldcom has provided a similar service between the U.S. and certain overseas points by means of its presently operative datel service; but this service has, since its inception, lacked some of the principal advantages of international dataphone service.

Datel service was inaugurated by ITT Worldcom, pursuant to F.C.C. Tariff No. 48, effective May 15, 1965. Under this tariff, ITT Worldcom, in conjunction with its overseas correspondents, offers the use of its facilities for the handling of data communications between the continental U.S., on the one hand, and Belgium, Denmark, France, Germany, Hong Kong, Japan, Netherlands, Sweden, Switzerland, United Kingdom, Hawaii and Puerto Rico, on the other.

In providing this service, ITT Worldcom furnishes its datel facilities to customers for the direct exchange of communication, on a subscriber-to-

subscriber basis, by means of a variety of high speed data transmission equipment, including paper tape, punch card, magnetic tape, and facsimile equipment. ITT Worldcom uses equalized (both amplitude and differential delay), dedicated channels for this service, capable of operating at speeds up to 1200 bits per second for digital transmission. Voice transmission is only used to initiate or conclude a datel call.

Since the inauguration of its international datel service, ITT Worldcom, from time to time, made both informal and written requests to AT&T for a direct electrical interconnection of domestic dataphone and international datel. Until recently, AT&T refused to accede to these requests. Finally, in July 1972, after ITT Worldcom had prepared and advised AT&T of its intention to file a Petition For Interconnection, pursuant to Section 201(a) of the Act, AT&T consented to limited direct interconnection of its domestic dataphone service and ITT Worldcom's international datel service on a 2-wire subscriber basis. Electrically interconnected datel service was commenced August 24, 1972.

Broadband Exchange services of The Western Union Telegraph Company (WUT) have been available to ITT Worldcom's datel customers, on a direct electrically interconnected basis, since the inauguration of Datel by ITT Worldcom on May 15, 1965. However, a good many of the ITT Worldcom's datel customers, with substantial data transmission requirements, were

already domestic dataphone subscirbers, and were unwilling to bear the additional cost of Western Union Broadband service. Thus, AT&T's years of inaction on ITT Worldcom's repeated efforts to obtain a direct electrically interconnected datel/domestic dataphone service has been a major factor in stifling the growth initially anticipated for datel service.

AT&T's reluctance to agree to direct datel/domestic dataphone electrical interconnection prevented ITT Worldcom from seeking the necessary approvals from foreign administrations for the installation of an automatic switch, which would have allowed datel customers to dial directly to foreign destinations. ITT Worldcom was, therefore, forced to provide the datel service on a manual basis only, with the further complication that a manual tape interface between the domestic dataphone network and the international datel system had to be established. Obviously, there was a greater potential for error where the datel/domestic dataphone interface was by manual tape relay (without subscriber-to-subscriber voice coordination) than there is in the case of a direct electrical connection.

Attached as Exhibit I is a summary of the datel revenues reported by each of the international record carriers offering this service. However, considering all the past and present problems associated with datel service offerings, ITT Worldcom does not regard the growth pattern shown by datel as a true indication of the growth potential of international dataphone.

ITT Worldcom is hopeful that there will be some improvement in the commercial acceptance of datel in 1973, now that it is electrically connected

to dataphone. However, we are not overly optimistic since many potential users may defer making any major commitment to datel until the Commission has determined the "ground rules" for international dataphone service, because international dataphone services would be clearly superior to datel services.

For the reasons previously stated, datel service, while possibly a service similar to dataphone service, has never been the "equivalent" of international dataphone service. Any meaningful discussion of the current and expected demand for international dataphone service, as requested by the subject Notice, must start with a listing of the principal operational features of the proposed service, which could be the following:

(a) International dataphone service should be initiated as a fully automatic, 2-wire (half duplex), domestic customer to overseas subscriber connection, with the same right to use voice, as presently exists with respect to AVD leases.

(b) Transmission facilities between the U.S. gateway and overseas gateways, should be fully equalized coaxial cable (nominal 3 KHz) channels. This gateway-to-gateway transmission facility would be able to support 2400 bps modems with a 10^{-6} or better error rate, and would be coincidentally conditioned to CCITT recommendations for analog transmission, such as facsimile or electrocardiograph applications.

(c) Countries served only by satellite facilities between international gateways would be differential delay and amplitude equalized to CCITT 2400 bps digital standards. But because of impulse noise, and presently uncontrolable transmission outages, no error rate could be guaranteed, and only data sink/source equipment, with incorporated error detection and correction equipment, should be recommended to the customer. Such recommended equipment would include sufficient internal storage to overcome the inherent absolute step function delay of the satellite path (minimum 600 Ms), plus the inherent delay of the domestic transmission systems at each international termination.

(d) ITT Worldcom, or the customer, at his option, should provide CCITT approved modems at each location required, and be responsible for the compatibility of data sink/source peripheral equipment at each location. ITT Worldcom would assist, where necessary, in recommending equipment type, configuration of system requirements, and the maintenance service arrangements.

(e) ITT Worldcom would test and record results achievable modem-to-modem between desired customer international equipped locations as typical error rates to be achieved without error detection and correction data sink/source equipment.

(f) International dataphone should be offered exclusively by U.S. international record carriers pursuant to negotiated agreements with foreign administrations.

(g) Rates for international dataphone would be comparable to the current rates for voice transmissions.

(h) ITT Worldcom would expect to install, at its New York gateway, a computer controlled transparent channel data switch, initially configured as a 4-wire trunk switch, with both the CCITT and NPA 809 signalization capability. Connection to the AT&T domestic dataphone network would be on a 4-wire trunk-to-trunk basis, between the ITT Worldcom New York gateway switch, and the designated AT&T international gateway switch. Because United States domestic customers are normally connected on a 2-wire (half duplex basis), the initial international service offering would be, effectively, a half duplex service.

(i) ITT Worldcom would expect at a later date, to offer to the public a 4-wire full duplex, automatic data service between subscribers in the United States and overseas destinations.

Even assuming the foregoing, ITT Worldcom knows of no scientific method by which an exact projection of its future international dataphone requirements can be made. Therefore, any quantification of the projected minutes and revenue requirements of international dataphone service, and the impact

of this new service on ITT Worldcom's existing services, particularly telex, must be based on:

(a) historical experience (particularly during recent periods of growth), trends in the utilization of services, and the general availability of new services and techniques;

(b) assumptions and competitive information (supported by the judgment of experienced forecasters), and marketing studies which have been performed in the general area of data transmission; and

(c) information and plans developed through discussions and negotiations with overseas correspondents.

When the subject Notice was issued, ITT Worldcom contacted various European administrations in an effort to understand the nature and extent of the public demand in these markets for international dataphone. In general, the administrations contacted advised ITT Worldcom that 15 countries of the CEPT organization have set-up a study group called "EURODATA," to collect data on the current, and future demand for dataphone service, and that it was not expected that a report by this study group would be completed before the end of 1973. Thus, we are unable to state, at this time, that ITT Worldcom's projections with respect to future international dataphone service can be substantiated by the general agreement of our foreign partners.

ITT Worldcom's projections are based, in part, upon what we know about foreign administrations with whom we now deal. Exhibit II, attached hereto, furnishes information which supports ITT Worldcom's estimates of the potential market for international dataphone service.

Exhibit III, attached hereto, contains a ten-year forecast of anticipated data minutes in major markets, based on the assumptions previously made as to the nature of international dataphone service.[22/] ITT Worldcom's Exhibit III is also based on the assumption that international dataphone service will be available in a majority of countries in 1976, and in the Far East in 1977. The year 1976 was chosen as the start-up year, primarily because of the availability at that time of the TAT-6 cable system. Additional cable channels are required in order to assure the highest quality transmission between overseas gateways and gateways in the U.S.

Certain other factors were considered in making this forecast:

(1) The CEPT study of International Data must be brought to a conclusion.

(2) Negotiations with each one of the foreign administrations, including negotiations as to the standards that will be used in providing this service, must be concluded.

22/ ITT Worldcom's Comments, pp. 14-16.

(3) Interconnection arrangements, with both AT&T and WUT, must be finalized in order that the international dataphone service, of the type previously described, can be provided to subscribers on a fully automatic basis concurrently with the inherent high quality of transmission associated with coaxial cable transmission.

Last, but not the least important consideration, is the fact that it would be necessary for ITT Worldcom to procure a computer controlled transparent channel data switch, which will be initially configured as a 4-wire trunk switch, with both the CCITT and NPA 809 signalization capability; and it estimates that it will be difficult to have such a switch built and operational before 1976.

The 1977 start-up date forecast in Exhibit III for international dataphone in the Pacific is primarily associated with the implementation of the cable expansion plans (Hawaii III and Transpac II)presently pending before the Commission.

EXHIBIT I

INTERNATIONAL RECORD CARRIERS
DATEL REVENUES*
1963 - 1971

YEAR	Revenues ITT	RCA	WUI	TOTAL	REVENUE INCREASE PERCENT
1963	-	8,700	6,096	14,796	-
1964	-	52,554	48,878	101,432	585
1965	10,597	64,852	75,811	151,260	49
1966	48,610	41,905	73,978	164,493	9
1967	93,908	52,771	113,881	260,560	58
1968	138,835	77,342	106,065	322,242	24
1969	156,334	119,022	96,898	372,254	16
1970	197,322	106,948	78,084	382,354	3
1971	196,156	67,113	64,744	328,018	(14)

*Source: FCC 903 Reports.

EXHIBIT II

DATA SERVICES IN KEY
EUROPEAN ADMINISTRATIONS

A. United Kingdom

1. Present terminals: 14,000 data terminals in operation at the end of 1970. The number of terminals working at various speeds is tabulated below:

Number of Terminals:	1800;	4200;	7800;	340;	10
Speed (bits per second):	100;	200;	600;	2400;	4800

2. Future terminals; 1969 Market Study to the Post Office was provided with the following forecast of terminal population for 1973, 1978 and 1983:

Terminals:	1973	1978	1983
Slow (up to 200 bps)	27,000	169,000	316,000
Medium (up to 10,000 bps)	24,000	65,000	117,000
Fast (greater than 10,000 bps)	180	390	637
Total Terminals	51,108	234,390	433,637

3. Present Datel Services

Datel 100 (a) At 50 bps via the telex network. Error detection units available to improve error rate from 1 in 30,000 to 1 in 10^6.

(b) At 50 bps or 110 bps on private circuits. Justified with about 2 hours of data traffic per day. Similar error control facilities.

Datel 200		Serial transmission at up to 200 bps simultaneously in both directions via switched telephone network or 2-wire leased speech circuits. Widely used by time sharing bureaus.
Datel 600	(a)	At 600 bps (guaranteed) and sometimes up to 1200 bps over switched voice network. One way only, with return supervisory channel up to 75 bps.
	(b)	At 1200 bps both ways simultaneously on leased 4-wire speech circuit. One such circuit can serve up to 12 spur terminals; these terminals can be small computers acting as concentrators for several low speed terminals. Widely used in banking.
Datel 2400		Serial transmission over improved quality, 4-wire leased speech circuits at 2400 bps, both ways simultaneously. Increasingly used by specialist time-sharing bureaus and for reservation systems.
Datel 48K	(a)	48,000 bps both ways simultaneously using special 4-wire cable from subscriber's premises to a repeater station on the multiplexed network, and a wideband (48 KHz) trunk circuit.
	(b)	Experimental manually switched service between London, Birmingham, and Manchester introduced in 1971. Uses regular local loop plant. Intended to encourage terminal development and help planning for future dedicated data network. Initial response disappointing despite free 6-month trial offer.
International Datel		Speeds up to 1200 bps using switched network. Countries served include North America, and many in Western Europe. Additional equipment (e.g., echo suppressors) needed in some cases. Tariffs usually the same as for voice communication.

B. Spain

During 1970 there were 400 modems in the data network most of them in Madrid and Barcelona. 3800 terminals are projected to be in service by 1975, and 8000 terminals by 1980. Present plans call for a separate switch data communication network, which initially would serve Barcelona, Madrid and Bilbao.

It is estimated by the Spanish Administration that the revenues from data transmission will reach $28.0 million in 1980, and be approximately 10% of its total revenue from existing voice and data services.

C. France

At the end of 1970 there were 3800 data terminals. In order to stimulate the data communication market, the French have made a significant expansion in this area by providing a new switched network, the Caducee Data System, which is especially designed for data transmission, and is already in operation to a limited number of cities. During the next few years additional exchanges to this system will be implemented in major cities throughout France, where speeds from 200 bps to 72 Kbps are planned to be in full operation.

D. Germany

There has been established a Datex Service where several hundred companies in Germany used data teleprocessing in their operation. Datex was introduced in 1967 and is a separate dial-up network for the transmission of data at speeds up to 200 bps, providing full duplex

operation. The number of subscribers to Datex Service has gradually increased. In 1968 there were 130 users; in 1969 there were 270; in 1970 there were 350, and an expectation that by 1973 there will be 1000 Datex terminals.

The German Administration is using the marketing and technological information gained from the Datex network as a foundation for the building of their future integrated digital network. Electronic data switching (EDS) will be an asychronous, time-division multiplex system controlled by a programmed common control computer. Transmission speeds are planned at 48,000 bps; 9600 bps; 2400 bps; 1200 bps and 200 bps.

EXHIBIT III

ITT WORLDCOM INTERNATIONAL DATAPHONE FORECASTED MINUTES

COUNTRY	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Spain	34,929	55,014	77,020	101,085	127,368	156,030	187,232	221,166	258,030	298,023
Netherlands	36,456	63,800	80,388	98,469	118,168	124,072	146,565	153,891	179,540	188,520
Italy	28,709	50,240	73,857	77,546	127,952	146,568	166,712	188,510	212,085	237,536
Germany	56,554	103,915	140,292	196,404	240,590	288,720	341,046	387,880	459,558	526,392
Belgium	25,265	66,320	97,489	131,616	168,905	209,599	253,935	302,175	354,616	431,134
France	35,707	74,982	118,098	165,336	202,538	243,056	287,100	334,960	386,870	443,136
United Kingdom	55,504	74,934	104,904	137,685	173,484	212,520	265,650	334,710	410,025	516,642
Switzerland	32,613	68,490	95,880	125,850	158,568	180,362	203,952	229,455	256,976	286,688
Nordic Countries	9,276	19,480	30,681	32,214	33,825	35,517	37,293	39,156	41,115	43,170
Australia	-	54,856	86,397	90,717	95,253	133,356	140,024	147,024	192,970	202,620
Japan	-	345,138	465,939	652,308	856,155	1,078,758	1,321,488	1,585,776	1,873,206	2,185,410

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EXHIBIT III

ITT WORLDCOM INTERNATIONAL DATAPHONE FORECASTED MINUTES

COUNTRY	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Hawaii	19,460	30,651	42,908	56,320	70,962	[illegible]	130,390	164,292	201,264	241,504
Philippines	-	91,479	192,108	268,952	352,990	444,768	505,934	572,096	643,605	720,832
Puerto Rico	43,689	103,212	132,462	164,372	185,864	209,190	248,829	307,380	355,014	406,656
Venezuela	39,738	62,586	87,624	115,005	138,906	177,506	239,634	279,580	352,272	431,522
Brazil	54,095	75,732	99,400	125,244	153,426	207,117	289,968	355,208	426,256	531,487
Argentina	36,172	56,970	79,760	104,685	131,904	161,581	193,896	254,490	320,652	420,855

A-109 Exhibit III Cont.

Question: (b) "The nature and extent of current public usage of dataphone service between the contiguous 48 states, and overseas points with which the service is now authorized."

ITT Worldcom's Response

No precise information is available on this point; however, it appears to ITT Worldcom that the growth of data transmission in the United States can be directly related to the number of modems that are placed in service.

It is ITT Worldcom's understanding that 25,000 modems were in service during 1971, catering to the needs of subscribers in the 200-600 bps range, and 40,000 modems in service during 1971, which catered to the needs of the subscribers in the 1200-2400 bps range. In the year 1975 it is forecast that there will be 60,000 modems in the 200-600 bps range in service, and that there will be 100,000 modems in the 1200-2400 bps range by 1975. On the basis of the foregoing, the number of data modems in service has more than doubled every two years.

Although much of the technological work relating to data transmission has been directed toward improving the characteristics of the existing analog telephone channels, for the handling of digital data in the United States, and compensating for the deficiencies associated with analog transmission characteristics -- using manual and automatic equalization techniques as employed in high speed modems in order to correct for variations in the electrical

characteristics of telephone channels -- data transmission in the United States has been inhibited by these factors.

Recognizing this problem AT&T has been actively working to develop a digital transmission facility for long haul transmission.[23/] This action indicates that the market for data transmission in the United States has grown to a point where it is necessary to improve upon the existing transmission systems, and the fact that the Bell System is prepared to make the substantial capital investment required to accommodate this market is, in itself, an indication of AT&T's confidence in its continued growth.

AT&T has announced its intention of offering end-to-end leased line digital data transmission services beginning in early 1974. In the first year of operation, service would be offered in two dozen major metropolitan areas. Approximately 60 cities would be served by the end of 1976; and by 1977 or 1978, the number of cities served would increase to more than 100. Thereafter, AT&T may be expected to offer a switched digital data transmission service building upon the existing digital data private line offering.

A number of the transmission systems announced by AT&T, which will be employed in the prospective digital data service, are the following

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23/ AT&T 1971 Annual Report, p. 10.

digital or hybrid digital/analog transmission systems:

T-1 System;

T-2 System;

Digital Microwave System;

The L Master Group Digital System;

The Data-Under-Voice (DUV) scheme for Microwave Radios.

The foregoing indicates that an extremely large market for digital data services presently exists in the United States, and that this market will expand at a rapid rate. It is logical to assume that, as a normal expansion of this market, many of AT&T's data customers will want to extend their domestic facilities to international locations.

ITT Worldcom is unable to provide any statistics on the extent of current public usage of dataphone service between the contiguous 48 states and the overseas point, with which the servi e is now authorized, since the limited direct electrical connection between dataphone and datel did not commence until August 24, 1972. Furthermore, as pointed out in our response to Question (a), ITT Worldcom does not consider international datel service and international dataphone service to be equivalent services. 24/

24/ ITT Worldcom's Comments, pp. 12-14.

Question: (c) "The technical and operational feasibility of providing dataphone or an equivalent service via satellite, including the availability and cost of error detection and correction equipment."

ITT Worldcom's Response

ITT Worldcom has previously stated that because of impulse noises and presently uncontrollable transmission outages, no error rate can reasonably be guaranteed on international dataphones, U.S. gateway to overseas gateways, which are served by satellite only transmission facilities. Data sink/source equipment with incorporated error detection and correction capability should be provided for use with these facilities.

Error detection and correction equipment when used with international dataphone will insure the correct transfer of information, but transfer efficiency is low, and results in a greater amount of time charged to the customer than would be the case in gateway-to-gateway dataphone transmission via coaxial cable.

Certainly, in the future, more sophisticated error detection and correction equipment will be developed which will improve this situation of poor transfer efficiency, but the problem effectively remains, since a substantial part of the existing error detection and correction equipment will still be part of the subscribers operating plans in 1976.

ITT Worldcom also believes that its coaxial cable gateway-to-gateway-concept simplifies the transmission of data with existing equipment, and provides a viable technical and operational feasibility for international dataphone in 1976.

Question: (e) "Whether the international record carriers should be authorized to provide overseas dataphone or an equivalent service,..."

ITT Worldcom's Response

As indicated by ITT Worldcom in its response to Question (d), ITT Worldcom believes that international dataphone service is a record service, and that this service should be furnished exclusively by the international record carriers for the reasons set forth in Part I of these comments.

Question: (e)(i) "The nature of interconnection and operating arrangements and agreements that would be involved between each international record carrier and domestic carriers, including billing practices, division of tolls, etc. "

ITT Worldcom's Response

ITT Worldcom would install, at its New York gateway, a computer controlled transparent channel data switch, initially configured as a 4-wire trunk switch, with both CCITT and NPA 809 signalization capability. Connection to the AT&T domestic dataphone network would be on a 4-wire trunk-to-trunk basis, between the ITT Worldcom New York gateway switch and the designated AT&T international gateway switch.

Operating arrangements and agreements between ITT Worldcom and domestic carriers of the North American network would be required so that:

(1) On international dataphone calls, where either operator assistance or a person-to-person connection is required, a number would be established by AT&T in the ITT Worldcom New York gateway which would allow the customer to speak with the ITT Worldcom operator. Then ITT Worldcom could satisfy special customer requirements for international dataphone calls.

(2) A subscriber of the North American network could initiate an automatic international dataphone connection, subscriber-to-subscriber, with operating practices similar to that now employed in the IDDD operation.

Before IDDD operation was initiated from the North American network, equipment modifications had to be made that would allow this equipment to accept an overseas access code, since the destination address, which follows, may be duplicated inside North America. AT&T has established two conversion plans -

(1) An initial plan which would provide service, although restricted to station-to-station calls, to international numbers not exceeding 11 digits.

(2) A long range plan which would provide automatic operation for both station-to-station and special calls to all dialable destinations from any office where an adequate volume of overseas traffic originates.

In the initial plan which permits station-to-station traffic to be dialed by customers, served from modified number 5 crossbar offices that have LAMA equipment, the customer dials the intercontinental access code followed by the country code plus the national number.

The number 5 crossbar modifications consist of changes in the originating register to accept the overseas access code and a variable number of digits, between 7 and 11, for the destination address.

The first 3 digits of the overseas address are translated to determine the proper overseas switching center to which the calls should be routed to provide access to the overseas circuit required. The call is then routed through the domestic network, by a 3-digit routing code, to a selected international

switching center, thus establishing a built-up connection. Once the connection has been established to an international sender, at the international switching office, the international address is pulsed forward on an MF basis, end-to-end, over the built-up connection. The international switching center establishes the connection, and extends the call forward in the same manner as if it had been initiated by an operator at an international operating position.

ITT Worldcom would request AT&T to modify their international access code and routing codes so that these calls are made accessible, and routed to the ITT Worldcom international dataphone switch. This switch would then select an international switching center and thus establish a built-up connection. Once the connection had been established to an international sender at the international switching office, an international address would be pulsed forward on an MF basis, over the built-up connection.
Thus the ITT Worldcom international dataphone switching center would establish the connection and extend the call forward, in the same manner as if it had been initiated by an operator at its international dataphone operating position.

There are numerous arrangements possible for the negotiation of the division of tolls. In a generalized discussion of these points, the following arrangements could be considered:

(a) For calls originating or terminating in gateways, AT&T would not participate in the division of tolls, other than their normal

business phone charges, which is a current practice applicable to existing Foreign Exchange Service.

(b) For calls originating or terminating in the hinterland - a carrier-to-carrier discounted tariff toll rate could be established between the New York gateway and the international dataphone subscribers location. Still another possibility is that AT&T adopt a single countrywide co-efficient for division of tolls, thus allowing AT&T to establish a fixed amount in this division of tolls, regardless of the international dataphone subscribers location.

After negotiation of interconnection and operating arrangements, ITT Worldcom would be able to establish billing practices -- which would allow for the settlement of accounts in the international dataphone area in much the same way as is the current practice between connecting carriers in similar services.

Question: (e)(ii) "The effect of such arrangements and agreements on speed, efficiency, quality and cost of service which may be anticipated, in case of both customer and operator dialed calls;"

ITT Worldcom's Response

ITT Worldcom has a proud history of providing a variety of record services with a speed of connection, an efficiency of operation, and a quality of service, second to none in the United States. Due to the intense competition between the existing record carriers, service innovations and prompt reaction to special customer requirements, on both customer and operator dialed calls, can be anticipated.

Question: (e)(iii) "Proposed arrangements, operating and financial, with overseas correspondents."

ITT Worldcom's Response

ITT Worldcom would propose to meet, negotiate and adopt arrangements, both operating and financial, with each of our overseas correspondents for the provision of international dataphone service in a manner consistant with presently existing practices.

Question: (e)(iv) "The cost which would be incurred by each respondent for such service, by principal items of investment and operating expenses;"

ITT Worldcom's Response

ITT Worldcom projects the following principal items of investment and operating expense associated with providing international dataphone service, under the conditions specified in its response to Question (a):

Investments	
International Data Switch	$ 1,600,000
Equalization equipment	1,000,000
Coaxial Cable ownership or IRU	11,700,000
Total Investments	$ 14,300,000
Operating Expenses	
Depreciation	$ 674,000
Maintenance and Operations (10 year average)	834,000
Satellite Rentals (10 year average)	375,000
Total Operating Expenses	$ 1,883,000

Question:(e)(v) "The charges proposed to be made for such service."

ITT Worldcom's Response

For the purpose of this response, the rates used by ITT Worldcom for international dataphone are comparable to present rates for overseas telephone message services. It must be understood, nevertheless, that such rates are normally established pursuant to negotiated agreements with foreign administrations, with due regard to revenue requirements and other economic factors.

Question: (e)(vi) "The revenues , gross and net, expected from such service."

ITT Worldcom's Response

Exhibit IV, attached hereto, is a ten-year projection of the estimated ITT Worldcom international dataphone gross retained revenues. Based on ITT Worldcom's experience, net revenues are about 84% of the gross retained revenues after payouts to domestic carriers.

EXHIBIT IV

ITT WORLDCOM INTERNATIONAL DATAPHONE GROSS RETAINED REVENUES

COUNTRY	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Spain	31,964	50,343	70,480	92,505	116,556	142,786	171,336	202,393	236,130	272,723
Netherlands	36,744	64,300	81,018	99,253	119,104	125,056	147,717	155,106	180,960	190,010
Italy	31,752	55,565	81,683	85,764	141,515	162,096	184,392	208,502	234,555	262,704
Germany	62,372	114,611	154,719	216,612	265,342	318,416	376,128	438,820	506,636	580,560
Belgium	26,978	70,815	104,104	140,539	180,356	223,808	271,155	322,660	378,651	460,372
France	38,802	81,486	128,340	179,676	220,094	264,112	311,994	363,980	420,398	481,560
United Kingdom	64,827	87,516	122,520	160,815	202,626	248,220	310,275	390,930	479,010	603,414
Switzerland	35,019	73,542	102,952	135,130	170,268	193,674	219,002	246,375	275,936	307,853
Nordic Countries	9,352	19,640	30,933	32,478	34,101	35,808	37,599	39,477	41,451	43,524
Australia	-	73,208	115,302	121,068	127,122	177,968	186,868	196,212	257,530	270,405
Japan	-	459,872	620,829	869,160	1,140,765	1,437,372	1,760,787	2,112,936	2,495,907	2,911,890

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EXHIBIT IV

ITT WORLDCOM INTERNATIONAL DATAPHONE GROSS RETAINED REVENUES

COUNTRY	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Hawaii	37,088	58,413	81,760	107,335	135,240	189,336	248,510	313,116	383,572	460,288
Philippines	-	98,070	205,950	288,328	378,430	476,820	542,380	613,312	689,970	932,768
Puerto Rico	83,680	197,694	253,704	314,834	355,992	400,500	476,595	588,740	679,976	778,816
Venezuela	33,886	53,370	74,720	98,070	123,564	151,368	204,345	238,410	300,396	367,976
Brazil	52,836	73,972	97,085	122,328	149,849	202,302	283,224	346,940	416,336	519,114
Argentina	28,252	44,496	62,296	81,765	103,020	126,203	151,440	198,770	250,452	328,710

A-125 EXHIBIT IV Cont.

Question: (f) "The relative efficiencies of record carriers, on the one hand, and voice carriers, on the other, in furnishing such services."

ITT Worldcom's Response

The intense competition, which exists among the several international record carriers, will tend to maximize the speed, efficiency, and quality of service furnished to international dataphone subscribers. ITT Worldcom believes that the voice carriers, with other much larger sources of income would not be subject to the same urgency in dealing with the development and operation of overseas dataphone services.

However, even assuming arguendo that the same degree of efficiency could be achieved by voice carriers, voice carriers should be precluded from furnishing international dataphone service for the reasons set forth in ITT Worldcom's response to Question (d), submitted as Part I of these comments.

Question: (q) "An estimate of number of circuits, in addition to those authorized each carrier for existing services, that will be required for the proposed services;"

ITT Worldcom's Response

Exhibit V, attached hereto, provides the international dataphone channel forecast by country for the ten-year period 1976 to 1985 inclusive.

EXHIBIT

INTERNATIONAL DATAPHONE CHANNEL FORECAST

(Cumulative By Year)

COUNTRY	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Spain	2	3	4	5	6	7	8	9	10	11
Netherlands	3	5	6	7	8	8	9	9	10	10
Italy	3	5	7	9	11	12	13	14	15	16
Germany	4	7	9	12	14	16	18	20	22	24
Belgium	2	5	7	9	11	13	15	17	19	22
France	3	6	9	12	14	16	18	20	22	24
United Kingdom	7	9	12	15	18	21	25	30	35	42
Switzerland	3	6	8	10	12	13	14	15	16	17
Nordic Countries	1	2	3	3	3	3	3	3	3	3
Australia	-	2	3	3	3	4	4	4	5	5
Japan	-	7	9	12	15	18	21	24	27	30
Hawaii	2	3	4	5	6	8	10	12	14	16
Philippines	-	3	6	8	10	12	13	14	15	16
Puerto Rico	4	9	11	13	14	15	17	20	22	24
Venezuela	2	3	4	5	6	7	9	10	12	14
Brazil	3	4	5	6	7	9	12	14	16	19
Argentina	2	3	4	5	6	7	8	10	12	15

Question: (h) "The effect on the revenues and service requirements of each respondent carrier, should one or more carriers in addition to said respondent be authorized to provide overseas dataphone or equivalent services;"

ITT Worldcom's Response

ITT Worldcom's response to the subject Notice, and its forecast of minutes and revenue associated with international dataphone, is based on the threshold assumption that international dataphone is a service furnished exclusively by international record carriers.

This assumption by ITT Worldcom, coupled with its response to Question (a), form the basis for an estimate by ITT Worldcom that, in 1976, diverted telex minutes between the United States of America and the foreign destinations indicated in its response to Question (g) would result in a minimum loss of gross retained telex revenues of almost $5,000,000. This is more than 8 times the gross retained revenues that ITT Worldcom estimates it will derive from providing international dataphone service during that year.

If AT&T were authorized to provide international dataphone, either on an exclusive basis or in competition with the international record carriers, this diversion would still take place. And such loss, projected into ensuing years, would prejudice their continued viability.

Question: (i) "How public interest, convenience and necessity will be served by authorizing one or more international carriers to provide overseas dataphone or equivalent services;"

ITT Worldcom's Response

ITT Worldcom, by its response to the various questions raised in the subject Notice, has demonstrated how the public interest, convenience and necessity will be served by authorizing only the international record carriers to provide overseas dataphone services. These carriers should not be required to engage in pernicious, "one-sided" competition with AT&T, since the relevant market is vital to the continued viability of the international record carriers, and it is relatively unimportant to AT&T's future.

Under the circumstances, the public interest in the continued viability of the international record carriers (which the Commission recognized in the TAT-4 Case)[25/] must be confirmed by the issuance of authorizations to furnish international dataphone services to the international record carriers only.

25/ 37 F.C.C. 1151,1159 (1964).

DATAPHONE SERVICE - FCC INQUIRY

	ARGENTINA		BRAZIL		VENEZUELA	
1) Outgoing City	Buenos Aires		Rio Sao Paulo		Caracas	
2) Terminating City	New York Main U.S.Cities		New York Main U.S.Cities		New York Main U.S.Cities	
3) Total yearly Traffic (minutes)	N B	S B	N B	S B	N B	S B
1973	36.000	36.000	60.000	60.000	48.000	48.000
1974	54.000	54.000	90.000	90.000	65.000	65.000
1975	82.000	82.000	135.000	135.000	98.000	98.000
1976	130.000	130.000	202.500	202.500	140.000	140.000
1977	160.000	160.000	263.250	263.250	190.000	190.000
1978	205.000	205.000	342.225	342.225	250.000	250.000
1979	270.000	270.000	444.892	444.892	330.000	330.000
1980	350.000	350.000	578.359	578.359	450.000	450.000

4) Nº of 3 minutes calls and minutes beyond	N B		N B		N B	
	3 mins Calls	Beyond 3 mins. Total Mins.	3 mins Calls	Beyond 3 mins Total Mins.	3 mins Calls	Beyond 3 mins Total Mins.
1973	10.000	6.000	17.000	9.000	13.330	8.000
1974	15.000	9.000	25.000	15.000	17.670	12.000
1975	22.000	16.000	37.000	24.000	26.000	20.000
1976	36.000	22.000	55.500	36.000	36.670	30.000
1977	44.000	28.000	71.750	48.000	50.000	40.000
1978	57.000	34.000	94.075	60.000	66.670	50.000
1979	75.000	45.000	121.630	80.000	88.330	65.000
1980	98.000	56.000	159.453	100.000	150.000	-

		ARGENTINA	BRAZIL	VENEZUELA
5) Average number Subscribers	1973	100	1.600	100
	1974	300	2.000	320
	1975	500	3.000	550
	1976	700	5.000	800
	1977	800	8.000	900
	1978	900	10.000	1.100
	1979	1.000	12.000	1.300
	1980	1.400	15.000	1.500
6) Total NB Gross Revenues(US$)	1973	108.000	180.000	144.000
	1974	162.000	270.000	195.000
	1975	246.000	405.000	294.000
	1976	390.000	607.500	420.000
	1977	480.000	789.750	570.000
	1978	615.000	1.026.675	750.000
	1979	810.000	1.334.676	990.000
	1980	1.050.000	1.735.077	1.450.000
7) Percentage IDDD		N/A	IDDD available in 1974.	N/A
8) % Digital/Data		N/A	N/A	N/A
9) Comments		Rates based on US$ 3 per minute 3 mins. minimum	Rates based on US$ 3 per minute 3 mins. minimum	Rates based on US$ 3 per minute 3 mins. minimum

CERTIFICATE OF SERVICE

I, Joanne L. Lucey, hereby certify that I have this 12th day of January, 1973, mailed by United States Mail, postage prepaid, a copy of "Comments Of ITT World Communications Inc." to the following:

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service	)))	DOCKET NO. 19558

COMMENTS OF
HAWAIIAN TELEPHONE COMPANY

Hawaiian Telephone Company (Hawaiian) respectfully submits the following comments in response to the Commission's Notice of Inquiry (FCC 72-673), released July 31, 1972 (36 FCC 2d 605) into the policy to be followed in future authorization of overseas Dataphone service.

Initially, Hawaiian notes that the Commission's inquiry, by its caption, is directed to "future authorization of overseas Dataphone service" (Emphasis supplied). As the Commission knows, Hawaiian has been authorized to provide and has been providing Dataphone* service between Hawaii and the U. S. Mainland since 1965 (See Dataphone Service Between the U. S. Mainland and Hawaii, 38 FCC 1222; 1 FCC 2d 374 (1965). Consistent then with the scope of the inquiry, Hawaiian's comments will be directed to future authorizations to serve new points.

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* Hawaiian recognizes "Dataphone" as a registered service mark of American Telephone and Telegraph Company. When used herein with a lower case "d", the term is intended to be generic.

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As described in the Notice, ". . . dataphone service permits subscribers to message toll telephone service, who have secured appropriate equipment to use that service to send data, facsimile, or record communications alternately with voice at regular message rates." Given the state of the telecommunications art and regulatory policy as they exist today, the Commission's description of dataphone service contains three key concepts: (1) the use of message toll telephone service, (2) by subscribers having appropriate equipment, (3) at regular message toll telephone rates.

With these concepts in mind, and with awareness of the numbers of subscriber provided equipments that under current regulatory thinking may be connected electrically or acoustically to the message toll telephone network, it becomes clear beyond doubt that subscriber use of the message toll telephone network for overseas dataphone service should not only be authorized and implemented, but can neither be foreclosed nor prevented.

That such use of the network is currently being made would be, in fact, a reasonable presumption. Hawaiian is aware, for example, that a significant number of its subscribers have acquired facsimile equipment which may be acoustically coupled to its telephone facilities. To those telephone facilities, the appearance of a subscriber dialed message telephone call is the same whether the subscriber speaks Hawaiian, English, Japanese, plays a record, or places his telephone handset in an acoustic cradle for facsimile

transmission. The message telephone network performs its transmission and switching function in the same way regardless of what is being transmitted.

For this reason, it is extremely difficult to identify or estimate the nature and extent of the current demand for dataphone service, or to project anticipated demand for the future. Hawaiian does anticipate substantial growth in the overall data transmission market, but is unable at this time to separate and quantify the portion of the data transmission market which might properly be considered as dataphone business.

Similarly, although the cost per message and revenue per message are the same as for any message toll call, it is not possible at this time to estimate with any degree of accuracy current or future gross or net revenues from dataphone service. As is currently the case with message toll telephone traffic volumes and revenues, Hawaiian would expect Hawaii-U. S. Mainland dataphone traffic to far exceed dataphone traffic between Hawaii and other Pacific points, with Hawaii-Japan traffic representing the second highest in terms of volume.

Since continued use of the message telephone network for dataphone service is so clearly indicated as to be non-controversial, and its duplication for the gathering and distribution of dataphone traffic so clearly uneconomic and impractical, it appears that the one area of potential controversy that may arise in the course of this inquiry may be

limited to the question of what carrier or carriers should be authorized to furnish the overseas link between the domestic and foreign message toll networks.

As the Commission is aware, Hawaiian now and for many years past provides and has provided "landline" facilities in Hawaii which are interconnected with overseas private line channels furnished by other carriers. Hawaiian has also interconnected its Datatel facilities with overseas channels furnished by ITT. It has not, however, interconnected its switched message telephone facilities for message toll telephone service with any United States carrier other than American Telephone & Telegraph Company. It is this integrated message toll telephone network that is being used and would continue to be used for overseas dataphone service between Hawaii and any new points where a market for dataphone service may exist. Just as no purpose would be served by injecting another carrier as a middleman for the purpose of transmitting across the Pacific traffic originating on Hawaiian's telephone exchange facilities and terminating on AT&T's Mainland facilities, so too Hawaiian sees no useful purpose in so injecting another carrier in the message toll telephone network for dataphone service to other points.

In short, Hawaiian respectfully submits that the message toll telephone network should continue to be operated in its entirety by those companies which now operate it, and that that network be allowed to continue to carry all

traffic it is capable of handling, without artificial distinction or arbitrary division of markets, and without introducing the unnecessary complexities of additional carriers, additional interconnections, additional operating arrangements, additional overheads, additional billing and division of revenue arrangements, and additional division of responsibility problems, all of which would contribute not to the rendition of more economical, speedier, more efficient and higher quality service to the public but rather to service degradation and higher costs.

Respectfully submitted,

CHADBOURNE, PARKE, WHITESIDE & WOLFF

By
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January 12, 1973.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service	)))	DOCKET NO. 19558

COMMENTS OF UNITED STATES
INDEPENDENT TELEPHONE ASSOCIATION

By its Notice of Inquiry in this docket released July 31, 1972, the Commission "especially requested" comments from, among others, the United States Independent Telephone Association (USITA). It is in response to that request that USITA respectfully submits the following brief comments.

As the Commission knows, the great majority of USITA's telephone company members are "connecting carriers," and engage in interstate or foreign communication through physical connection with other carriers. With very few exceptions, USITA's members are not involved directly in the furnishing of overseas dataphone service, and therefore we are not in a position to meaningfully respond to the Commission's questions concerning overseas dataphone market and traffic data. Domestically, reports to USITA from its members show that in Independent telephone company territory, dataphone subsets (all types) totaled 10,714 in 1971, a figure that may be compared with the 1967 total of 4,799.

The Commission has also asked, however, for comment on the use of the "public switched telephone network for the

overseas transmission of data and facsimile alternately with voice communications" (Notice, ¶9(d)). This question, in USITA's firm opinion, permits only one answer. The switched telephone network, constructed and operated as an integrated system by companies of the Bell System and the 1,800 Independent telephone companies of the United States on whose behalf USITA speaks, can and indeed must be used for the provision of overseas dataphone service. In no other way can Independent telephone company subscribers now place telephone calls to overseas points, and in view of the demonstrated capability of the switched telephone network to handle, through Dataphone service, data and facsimile transmission, to now prohibit its use or endeavor to duplicate its facilities solely because of an overseas destination would be unthinkable.

USITA's members are fully prepared to continue to furnish total communications service to their subscribers, and therefore most strongly recommend that the Commission remove any existing restrictions on the use of the switched telephone network for overseas dataphone-type service.

Respectfully submitted,

CHADBOURNE, PARKE, WHITESIDE & WOLFF

By _____
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1150 - 17th Street, N. W.
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January 12, 1973.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)))	Docket No. 19558

COMMENTS OF
AMERICAN TELEPHONE AND TELEGRAPH COMPANY

American Telephone and Telegraph Company (AT&T) submits herewith its comments in response to the Commission's Notice of Inquiry, adopted July 26, 1972, in the above entitled proceeding.

Preliminary Statement

1. AT&T's Long Distance Message Telecommunications Service* (hereinafter sometimes referred to as "MTS") consists in general of telephone service provided on a message basis between points in different states within the contiguous United States and between points in the contiguous United States and overseas United States and foreign points. In the contiguous

* This service was formerly called Long Distance Message Telephone Service and is provided under AT&T's Tariff FCC No. 263.

United States MTS is provided by means of the domestic public switched telecommunications network (hereinafter called the "public switched network") which permits a telephone caller to connect with any other subscriber on the network. The domestic public switched network is connected with similar networks at overseas United States points and in foreign countries by means of overseas and international channel facilities to form a worldwide integrated public switched network over which telephone service is provided rapidly and efficiently between points virtually anywhere in the world.

2. AT&T does not provide a discrete service for the transmission of data* messages. However, since 1958 AT&T's MTS tariff has allowed subscribers to MTS to use that service on a permissive basis for the transmission of data between points in the contiguous United States and between points in the contiguous United States and points in Canada. In 1965 permissive use of MTS for such purpose was extended to Hawaii; and it has since then been extended to Alaska.

3. The domestic public switched network is well suited for handling certain types of data transmission with characteristics which fall within the technical

* For purposes of these Comments, the term "data" means facsimile, record and data transmission.

parameters of the network. The use of MTS for data transmission involves the interconnection of the network and customer provided terminal equipment. The interconnection may be made by direct electrical connection or acoustically or inductively. Direct electrical connectin is made through interface equipment* which makes the data signals generated by the customer's terminal equipment suitable for transmission over the public network. When acoustic or inductive, the connection is made externally to a Telephone Company protective device, to protect the telecommunications network.

4. When the public switched network is used for data transmission, no special types of line facilities are selected for handling the data messages and no special conditioning or other treatment is applied to the facilities used. Nor are any special operating procedures required. The data call is handled in exactly the same manner that a telephone call is handled over the network. For the use of MTS for the transmission of data messages the customer pays the regular rate for telephone calls. The use of MTS for data transmission is thus merely an optional use of MTS and not a discrete communication service.

* This interface equipment may consist of a Bell System DATA-PHONE data set or a data access arrangement. DATA-PHONE is a Registered Service Mark of AT&T.

5. Because message data transmission is not a discrete service but merely the permissive use of MTS, precise information concerning the nature and extent of such use of MTS is not available. However, in view of the growth in the number of Bell System DATA-PHONE data sets and data access arrangements used in conjunction with the public switched network in recent years, it is reasonable to conclude that the use of MTS for data transmission in the contiguous United States is substantial and increasing. A recent survey of the signal patterns of traffic using MTS circuits to Hawaii and Alaska indicates that the public switched network is being used to some extent for data transmission to those States. Since MTS to Hawaii and Alaska uses both submarine cable and satellite channels to interconnect the network in the contiguous United States and the networks in Hawaii and Alaska, the survey established the feasibility of meeting at least some overseas data requirements by overseas satellite channels.

6. In view of the worldwide economic and business development which is being experienced and the developments in computer technology, it is reasonable to assume that the demand for overseas message data service will grow. Expansion of the use of the public switched network for such service, which is now limited to Hawaii and Alaska, should play an important part in meeting this demand. This view is supported by the

letter of Xerox Corporation, dated June 17, 1971, referred to by the Commission in its Notice of Inquiry, in which Xerox requested that the Commission remove the existing limitations with respect to the public's use of the public switched network for the overseas transmission of data. In addition, the comments filed by Xerox and by the Computer and Business Equipment Manufacturers Association (CBEMA) in this proceeding contain further evidence of the desire and need of the business community and others to use the network for such transmission. AT&T has itself received similar requests from other customers that the limitations on the use of the public switched network for overseas data transmission be removed.

7. The comments filed by CBEMA in this proceeding contain a very informative analysis of the needs of the business community for overseas business communications which appears to AT&T to be basically sound. As pointed out by CBEMA, international telecommunications service users tend to employ those services most suited to their individual needs. The large users tend to employ all available services in varying degrees but rely heavily on private line voice and non-voice services. The smaller user is more

likely to use the message type services. The international record carriers provide private line alternate voice/record services which meet the requirements of the large users with sufficient volume to justify such services. However, as CBEMA indicates, there is a real need for a message type, or what CBEMA calls an "on demand", alternate voice/non-voice service offering for users who do not have the traffic volume to warrant private line service. Permissive use of MTS for data transmission to all overseas points would be a logical, efficient and economical method of meeting most of this requirement.

8. There are no technical or operating reasons why the worldwide public switched network should not be used for the overseas transmission of data messages. As pointed out above, the domestic public switched network now operates with customer provided data terminal equipment to transmit data within the contiguous United States and to Canada, Hawaii and Alaska. AT&T understands that the public switched networks in many foreign countries, particularly the more economically advanced countries in Europe, are used for the transmission of data both within the countries and between such countries and other countries. While the data terminal

and interface equipment and operating techniques used may be different in those countries from those used in the United States, they nevertheless are compatible, and work, with the public switched networks in their respective countries, which networks are in turn compatible, and work, with the domestic public switched network in the United States. In fact many of the data sets used in the United States and abroad are manufactured to CCITT standards and are therefore compatible with one another and with the public switched networks. Therefore, as far as the facilities are concerned, data may be transmitted between the United States and overseas points using the worldwide public switched network.

9. Not only does the public switched network provide the facilities needed for overseas data transmission, it also provides an existing trained and competent worldwide work force and proven operating procedures for such use. The public switched networks in most countries of the world are operated on a coordinated basis. Use of the networks would provide data

users with ready access to substantially all points in the world reached by telephone service. As overseas direct distance dialing expands, data users would be able to dial-up calls for data transmission as speedily and easily as they can dial-up telephone calls. And other special features of present telephone service would be available to data users, such as collect and credit card calling.

10. AT&T has discussed the use of the public switched network for data transmission between the United States and Europe with its correspondents in several European countries, including Denmark, France, Germany, Italy, The Netherlands, Switzerland and the United Kingdom. All of these correspondents expressed strong opposition to any tariff restriction against the use of the public switched network for data transmission, especially since, as they pointed out, it is not practical to enforce such restrictions. They indicated that they would place no restrictions on the use of their public switched networks by their customers for data transmission to the United States. They strongly support the view that customers in the United States should be permitted to use the network for data transmission to other countries. As the Commission recognized in the TAT-6 Order, international communications are "a mutual effort among tele-

communications entities of several nations, and require, by their nature, the utmost effort by those concerned to cooperate in resolving differences of opinion and objectives".* Accordingly, the views of the foreign correspondents with regard to the use of the public switched network for overseas data transmission should be given considerable weight.

11. For the reasons set forth above, the present artifical restrictions on the freedom of MTS users to utilize that service, on a permissive basis, for the overseas transmission of data messages are wasteful and unwise. At a time when the government, business and even the general public are becoming dependent to an ever greater extent upon rapid and efficient world communications of various types, maximum utilization should be made of the highly accommodative public switched network. It should also be noted that, as a practical matter, it would be very difficult to enforce such artifical and undesirable restrictions on the use of the public switched network without the development and installation of costly surveillance and detection equipment. The public interest clearly requires an end to such tariff restrictions.

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* Memorandum Opinion, Order and Authorization, adopted July 7, 1972 (FCC 72-613), para. 39.

12. The international record carriers now provide an overseas message data service, called DATEL. This service is provided by the record carriers between their gateway cities in the United States to overseas points. In the gateway cities in the United States the service is connected to Western Union's Broadband Exchange Service or AT&T's MTS for transmission of the messages destined for points in the United States beyond the record carriers' gateway cities. AT&T understands that in the provision of DATEL service the record carriers normally employ overseas cable channels with special conditioning to meet the requirements of data users. DATEL service is thus available for use by data users whose requirements AT&T's MTS might not accommodate. Also, continued provision of the record carriers' DATEL service, together with the availability of AT&T's MTS for overseas data transmission, would offer data users a choice of services in seeking to meet their needs which both Xerox and CBEMA strongly advocate in their comments. AT&T, therefore, believes that, in the public interest, not only should the restrictions on the right of customers to use its MTS for overseas data transmission be removed but the record carriers should be authorized to continue to provide their DATEL service.

General Policy Recommendations

13. In the light of the above discussion and the responses to the specific items enumerated in the Notice of Inquiry which follow, AT&T is of the view that the policy to be followed in the future authorization of overseas message data communications should be as follows:

(a) Any existing restrictions set forth in the facility authorizations issued to AT&T and in its Long Distance Message Telecommunications Service Tariff (FCC Tariff No. 263) implementing such authorizations should be removed to permit use of the public switched network for the overseas transmission of data, subject to the technical capability of the facilities involved.

(b) The international record carriers should continue to be authorized to provide their DATEL or equivalent services, and the United States domestic public switched network should be interconnected with the overseas facilities of the international record carriers used to provide those services.

Responses to Specific Items Set Forth in Paragraph 9 of the Notice of Inquiry

14. AT&T's responses to the individual items set forth in paragraph 9 of the Notice of Inquiry, insofar as they are applicable to AT&T, are as follows:

(a) The nature and extent of the current and expected public demand for data-phone or an equivalent service between U.S. and overseas points, quantified in terms of messages and minutes, and the factors underlying such estimates.

AT&T has estimated that part of the total overseas message data market that it expects would be carried over its public switched network. The estimate is based upon AT&T's knowledge of the domestic usage of MTS for data calls, upon its knowledge of the quantitative relationship between data and voice usage for overseas message service between the contiguous United States and Hawaii and Alaska, and other available information. Such estimates and information were useful in drawing conclusions regarding the proportional levels of overseas messages involving data usage that might be expected.

With respect to the demand in terms of the number of messages, AT&T's information concerning the use of MTS in the contiguous United States indicates

a ratio of data messages to total messages of about 4% for interstate business. For the more developed foreign countries shown below, the estimated 1970 average ratio of modems to total telephones was 62 per 100,000 compared with an estimated ratio of 180 per 100,000 for the United States. These ratios are expected to become more nearly equal by 1980. From this comparison and considering the present relationship of data to voice usage between the contiguous United States and Hawaii and Alaska, the ratios which appear appropriate for use in describing the message volume relationship between overseas message data and voice traffic in the years 1973-1980 are as follows:

More developed countries (e.g., England, France, Italy, Japan, Sweden, The Netherlands and West Germany) and Hawaii and Alaska	- 0.3% 1973, graduated to 3.5% 1980
Other countries	- 0.1% 1973, graduated to 0.5% 1980
Weighted ratio	- 0.2% 1973, graduated to 2.0% 1980

Application of this weighted ratio to AT&T's overseas message forecast provides the following estimates of overseas message data usage:

Year	Messages (Millions)	Minutes (Millions)
1973	.1	.6
1974	.2	1.1
1975	.5	2.9
1976	.8	4.9
1977	1.3	7.8
1978	1.9	11.2
1979	2.8	16.8
1980	4.0	24.0

* * *

(b) The nature and extent of current public usage of dataphone service between the contiguous 48 states and overseas points with which the service is now authorized.

Since there is no apparent distinction between types of calls placed over the public switched network, AT&T does not have precise information concerning the actual use that is currently being made of the facilities for overseas data transmission. However, such use results from the growing need of business concerns to transmit data to overseas points and to transmit digital type signals between business machines of various types, including computers, as indicated by Xerox in its Comments filed in this proceeding, and such demand is expected to grow. On the basis of the information available from a sampling of messages in September 1972, AT&T estimates that the present annual use of the public switched network for data transmission between the contiguous United States and Hawaii and Alaska is in the order of:

	Messages	Minutes	Percent of Total Traffic on Route
Hawaii	5,000	28,000	0.1%
Alaska	25,000	138,000	0.6

* * *

(c) The technical and operational feasibility of providing dataphone or an equivalent service via satellite, including the availability and cost of error detection and correction equipment.

It is AT&T's view that the transmission of data via satellite is technically and operationally feasible. However, because of the delay factor involved in satellite transmission, the stop and go method of error detection and correction may cause inefficient use of the satellite channel. This results from the "turn-around time" required for transmission of an "O.K." or "not O.K." signal from the receiving terminal and the restart of the transmission. Therefore, for customers whose data systems use block parity checking, satellite facilities may prove less satisfactory than cable facilities which do not have any significant delay factor.

AT&T believes that measures could be taken by manufacturers of data terminal equipment to use other methods of error detection and correction which would result in smaller loss of productive transmission time on

satellite facilities. The comments filed by Communications Satellite Corporation in this proceeding support this belief.

* * *

(d) Whether the restrictions set forth in the facility authorizations issued to AT&T and in the message toll telephone tariffs of AT&T implementing such authorizations should be removed to permit use of the public switched telephone network for the overseas transmission of data and facsimile. alternately with voice communications; and, in this connection:

(i) the cost of such proposed service, by principal items of investment and operating expenses;

As noted above, it is not contemplated that the use of the public switched network for overseas transmission of data would involve any additional or changed equipment or operating procedures related to the network. Accordingly, the costs involved would be no different than costs associated with handling other calls.

* * *

(ii) the charges proposed to be made for such service;

The rates for the use of the public switched network for overseas data transmission would be the same as the rates for overseas message telephone service.

* * *

(iii) the revenues, gross and net, expected from such service;

On the basis of the estimated overseas message data volumes set forth in the response to item (a) above, AT&T estimates that the gross revenues from overseas data transmission, and AT&T's share thereof after deducting the shares of overseas carriers and administrations participating in such transmission, for the remainder of this decade would be as follows:

	Revenues (Millions)	
Year	Gross	AT&T's Share
1973	1.0	0.5
1974	2.0	1.0
1975	5.0	2.5
1976	8.2	4.1
1977	12.6	6.3
1978	17.5	8.8
1979	25.2	12.6
1980	34.8	17.4

* * *

(iv) the operating methods which would be applied to such service;

Operating methods would be identical to the operating methods used by AT&T for regular telephone calls. A customer would arrange to establish a connection for his data transmission in a manner which is not distinguishable from an ordinary telephone call to the desired distant location. The transmission of data over the connection would then proceed with or without voice coordination. The data modem or data access arrangement terminal equipment generally would be identical to that used with the public switched network for data transmission in the contiguous United States. This arrangement would provide the simplest access to, and the least costly and widest utilization of, overseas facilities by the public.

* * *

(v) proposed arrangements, operating and financial, with overseas correspondents;

No significant change in the existing service and operating arrangements with overseas correspondents would be required. An understanding would be reached with such correspondents that each would permit the use of MTS for the transmission of data and that no additional charge would be made to the customers for such use. The revenues from such use would be

indistinguishable from other telephone message revenue and thus would be shared with the overseas correspondents as revenues from message telephone service. A substantial number of AT&T's overseas correspondents have indicated informally that they would agree to, and in fact desire, this arrangement.

* * *

(e) whether the international record carriers should be authorized to provide overseas dataphone or an equivalent service and, in this connection,

(i) the nature of interconnection and operating arrangements and agreements that would be involved between each international record carriers and domestic carriers, including billing practices, division of tolls, etc.

As indicated in paragraph 13 above, AT&T believes that the international record carriers should be allowed to continue to provide and develop their overseas message data services, such as DATEL. Although DATEL is now interconnected with AT&T's public switched network in the contiguous states as mentioned in paragraph 12, the details of the operating arrangements between AT&T and the international record carriers have not yet been completed.

Subparagraphs (ii), (iii), (iv) and (v) of item (e) relate to the operations of the international record carriers and are not applicable to AT&T.

* * *

(f) The relative efficiencies of record carriers, on the one hand, and voice carriers, on the other, in furnishing such services;

If the voice carriers provide overseas message data service, they will provide the entire service, including the overseas channel portion of the service, using the worldwide public switched network. If the record carriers provide the service, they will provide the overseas channel portion of the service, and in addition the arrangement to connect those channels with the public switched network. The voice carriers will provide the connecting public switched network. The channel facilities used in either case will be essentially the same, although the record carriers may specially condition for data transmission the channels they use, and both the voice and record carriers may be presumed to have the experience and competence to provide the service.

In AT&T's opinion, the principal factor relating to the relative efficiencies of the voice and record carriers in furnishing the service would be the

need, if the service is furnished by the record carriers, to make special arrangements to divert the data calls from the public switched network at the originating end to the facilities of the appropriate record carrier for the overseas transmission and then to retransfer the calls to the public switched network at the place of destination. If the voice carriers provide the overseas channels, on the other hand, no special arrangements will be necessary since the techniques and procedures in existence for normal MTS service will apply. Arrangements for provision of the overseas channels by the record carriers would very likely result in some increase in the over all cost of providing the service and, in some degree, inconvenience to customers and impairment of the service. However, it is not feasible at this time to estimate the additional cost, or measure the inconvience to the customers, that might result.

If the voice carriers are not authorized to provide overseas message data service, all customers with overseas data requirements will be compelled to use the service furnished by the record carriers even though many customers' requirements could be met technically by use of the voice carriers' facilities. Thus the probable higher cost and the added inconvenience of the record carriers' service would be unnecessarily imposed on all overseas data calls.

* * *

(g) An estimate of number of circuits, in addition to those authorized each carrier for existing services, that will be required for the proposed service;

AT&T's present estimate of the volume of overseas message data traffic it might be called upon to handle during the remainder of this decade is set forth in the response to item (a) above. Using the methodology normally employed in estimating circuit requirements for overseas message telephone service, these traffic data would translate into requirements for additional circuits that are less than the normal fluctuation range for the forecast itself. For example, the additional circuits for 1973 because of data usage would be about 10, which is significantly less than one percent of AT&T's total overseas circuit requirements. Even in 1980, the circuit requirements because of overseas message data are estimated to be about two percent of the total overseas requirements. Therefore, for the remainder of this decade, AT&T's circuit needs resulting from data usage would have a negligible effect on AT&T's total overseas circuit requirements.

* * *

(h) The effect on the revenues and service requirements of each respondent carrier, should one or more carriers in addition to said respondent be authorized to provide overseas dataphone or equivalent services;

AT&T's share of the anticipated revenues shown in the response to item (d)(iii) above assumes that the international record carriers will be authorized to continue to provide their DATEL Services.

* * *

(i) How the public interest, convenience and necessity will be served by authorizing one or more international carriers to provide overseas dataphone or equivalent services;

As noted in these Comments, there are indications of a growing need on the part of the public for an overseas message data service. For the reasons set forth herein, the use of the overseas MTS network for this purpose on a permissive basis would constitute a logical and efficient use of that network and an economical method of meeting the public need for this type of service. Continued authorization of the international record carriers to provide their equivalent services, such as DATEL, should meet the needs of the public for specialized services which permissive use of the MTS network might not accommodate. The combination of the permissive use of AT&T's Message Telecommunications Service and the record carriers' DATEL type services would thus meet the growing public need for services of this type and would serve the public interest, convenience and necessity.

* * *

(j) Any other information considered relevant to this inquiry.

AT&T has no additional information to submit at this time on the subject of this inquiry.

CONCLUSION

15. The policy questions concerning overseas message data service raised by this proceeding are timely. A policy statement on the subject is urgently needed so that the growing public need for such service may be met.

16. AT&T submits that a policy for the provision of such a service in accordance with the recommendations set forth herein would serve the public interest, convenience and necessity. AT&T strongly recommends that the Commission adopt such a policy.

Respectfully submitted,

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

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Dated: January 11, 1973

CERTIFICATE OF SERVICE

I certify that on January 11, 1973 I served the foregoing "Comments" by mailing a true and exact copy thereof by prepaid United States Mail to the following:

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	))))	Docket No. 19558

COMMENTS OF
THE WESTERN UNION TELEGRAPH COMPANY

1. The Federal Communications Commission (FCC) by Notice of Inquiry released July 31, 1972 requested comments with regard to future Commission policy concerning authorization of overseas dataphone service. In this connection, the FCC requested parties to submit substantial factual information in connection with the provision of such a service, including the present and future demand for dataphone or equivalent international service, the physical facilities in connection with the provision of such a service, which entity or entities should be permitted to offer the service if international dataphone should be authorized, and extensive details concerning the above general categories as well as any other information considered relevant to the inquiry. Western Union, as a domestic record carrier has an obvious interest in the inquiry since dataphone service is in certain respects competitive to Western Union's teleprinter and broadband exchange services.

2. Much of the substantive suggestions that can be made in connection with this inquiry depend to a large extent on the

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nature of the factual information requested by the Commission in its Notice of Inquiry. The information requested, in large measure, is in the possession of the international record carriers (IRC's). Western Union will study the data presented and submit reply comments after thorough analysis of said data. Nevertheless, Western Union sets forth herein its preliminary observations on this matter.

3. This inquiry has greater significance as a result of the institution by the Commission of a broad inquiry into the IRC's scope of operations in the continental United States, Docket No. 19660 (FCC 72-1141 mimeo no. 89781; released December 18, 1972). The scope of Docket No. 19660 includes a determination of the role the IRC's will play in the provision of domestic communications services. A similar issue is present here in connection with the provision of international dataphone service. Additionally, the instant proceeding also contains the threshold question of whether international dataphone service should, in the first instance, be authorized It is expected that the data to be submitted in response to the inquiry will be helpful in determining the threshold question.

4. One of the elemental concerns in this proceeding is the circuit requirements for the provision of dataphone service. It is elemental that an alternate voice data service requires substantially greater circuit capacity than telegraph grade service. Furthermore, there appears to be a question as to whether dataphone service would be practical over satellite circuits. As

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indicated in the Commission's Notice of Inquiry, para.6, Western Union International (WUI) in Comments submitted in Docket No. 18875 indicated that cable circuits are essential for providing dataphone service. If that is indeed the case then estimates of circuit requirements on existing and proposed cable facilities would in all probability have to be revised.

5. Furthermore, regardless of the method employed for overseas transmission of dataphone service, (i.e. cable or satellite) the international carriers would be required to revise their estimates of their revenue requirements for other services assuming that those carriers would be involved in providing the service. The necessity of such a revision is indicated by the experience with datel service introduced by the international record carriers in 1962. As stated by the Stanford Research Institute, datel "was introduced in spite of the fact that the record carriers stand to lose significant revenue from telex customers. An overseas voice grade circuit divided into 22 telex circuits can yield over 10 times the annual revenue that the same circuit can yield when used for datel service."* It appears probably that dataphone service would burden other services.

6. A principal question before the Commission is whether there is sufficient demand for international dataphone service. Pending an analysis of the data to be submitted, there is nothing to indicate that there is such a demand.

---

* Study of International Telecommunications Policies, Technology, and Economics (1966) Supplement A, p. 27.

7. A further question for resolution, in the event that there is evidence of sufficient demand for the service, would be which entity or entities should be authorized to participate in the provision of international dataphone service. As the Commission noted in paragraph 3 of the Notice of Inquiry, its TAT-4 decision (American Telephone and Telegraph Company, 37 FCC 1151 (1964)) restricted AT&T in its provision of leased circuits for alternate voice record use. As the Commission stated:

> . . .we shall grant the AT&T applications for modification of its existing authorizations so as to permit it to provide circuits to the international record carriers so that they may provide such service, but shall deny them in all other respects insofar as they relate to alternate voice-record use.

8. A further consideration is the restriction upon AT&T in its provision of dataphone services for a five (5) year period following the consumation of the sale of its TWX services to Western Union. In approving the sale, the Commission restricted AT&T from providing its customers with teletypewriters which operate at less than 300 bits per second to dataphone customers who did not theretofore lease them. AT&T may however, continue to permit customers to attach their own teletypewriters or teletypewriters leased from others to their dataphone outlets (24 FCC 2d 664 (1970)).

9. Thus, it appears that there are substantial existing policy determinations which would prevent AT&T from providing

the international dataphone service. Similarly, there is concern with permitting the IRC's to provide dataphone service under existing circumstances. At present, the IRC's provide international telex service in conjunction with Western Union's domestic telex and TWX networks, and marketing its own telex services in the gateway cities. A substantial portion of international telex service originates with the IRC's telex customers in the gateways. There is likely to be some diversion of telex business to dataphone, should the service by authorized. To the extent that there would be diversion of telex business to dataphone, Western Union would suffer loss of revenue. The magnitude of the adverse impact upon Western Union could be substantial and, if so, the provision of telex service could be affected in a manner detrimental to the public interest. The expected magnitude of such diversion should be quantified to some extent from the information to be submitted by the other parties to this inquiry.

10. Because of the nature of dataphone service as provided by AT&T exclusively, the IRC's would simply interface with AT&T in transmitting dataphone overseas. Unlike telex, the IRC's would be in no position to be a retailer of such services as well as the transmitting carrier. As a result, the IRC's would be in the anomalous position of interconnecting with AT&T for the transmission of a service which is diverting revenues from telex service, a service which the IRC's market vigorously in the United States. If these circumstances should obtain, and there is a

sufficient demand for dataphone service with the IRC's providing the overseas transmission facilities, the Commission should re-evaluate the proper role of the IRC's as a retailer of communication services in the United States. It may well be that should the IRC's be authorized to transmit international dataphone, that the IRC's would be evolving into a "carrier's carrier" and as such they should be restricted from selling any services to the public because of the obvious conflicts and anomalies that would result.

Respectfully submitted,

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January 12, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of	)	
	)	
Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19558

COMMENTS OF
TRT TELECOMMUNICATIONS CORPORATION

TRT Telecommunications Corp. (TRT) submits the following comments in response to the Notice of Inquiry concerning the provision of overseas Dataphone service.

The policy decisions of the Commission in this proceeding will have a crucial impact on the future of international record carriers, for Dataphone service promises to supersede to a very significant degree much of the record service presently offered by the international carriers. For example, today there is no legal means for direct connection to the U. S. domestic switched network for international transmission of documents via wire or radio, and the record service of the international carriers -- typically Datel, telex or leased-channel service -- is utilized for this purpose. Dataphone, with its capability for facsimile transmission, will fill this void and will divert from the record carriers a significant volume

of present traffic.

In its order authorizing the TAT-4 submarine cable, the Commission made the basic policy decision that alternate voice-record service was essentially a record service that should be provided in the international sphere by the record carriers. American Telephone & Telegraph Company, 37 F.C.C.1151, 1159. Dataphone is a form of alternate voice-record service and should be governed by the same policy adopted by the Commission in its TAT-4 order and for the same reasons.

The TAT-4 order precluded AT&T from providing international alternate voice-record service because it recognized that if AT&T were allowed to offer the service it would jeopardize the opportunity of the record carriers to develop the field and because the diversion of business to AT&T from the traditional forms of record service "could have a serious effect on the viability of the international telegraph industry as a whole . . . . It is in the public interest that we assure the viability of the record carriers by protecting them from the losses they would inevitably suffer were AT&T permitted to provide this voice record service." 37 F.C.C. at 1159.

A similar approach is dictated in the case of Dataphone service which, like the alternate voice-record service considered in the TAT-4 order, would be only an incidental element of AT&T's overall business and merely ancillary to its pre-existing monopoly of international voice service. On the other hand, Dataphone promises to become a prime service of the record carriers -- one which is certain to reduce the rate of growth of their other service offerings.

Preclusion of AT&T from the international Dataphone field would also advance the goal of maintaining competition in communications services. For if AT&T were authorized to provide Dataphone service internationally, it would, by virtue of its domestic monopoly of the service, quickly dominate if not monopolize the international field. There would be no effective competion. On the other hand, with AT&T not providing the service internationally, the record carriers would be in a position to compete on equal terms, each having equal access to the domestic AT&T network. Thus, the public would enjoy the benefits of competion from four international carriers, and this competition is certain to

advance and improve the quality and nature of the service which is still in its early stages of development.

* * *

Because TRT has been confined until recently to providing service in the Latin American area, which is less developed economically than the European area, there has been little opportunity in the past for TRT to develop a demand for Dataphone-type service. Moreover, until recently transmission facilities suitable for Dataphone-type service have not been available to most of the points in the Latin American area served by TRT. Under these circumstances, it has been premature for TRT to begin specific planning and to make investment commitments for Dataphone service. Moreover, the potential for AT&T dominance of the field has been a chilling factor in TRT's internal deliberations.

Now that TRT has been authorized to expand its operations to the European area, TRT is prepared to address and develop a Dataphone service. Moreover, the improvement of transmission facilities in Latin America and its continued economic development are opening that area to Dataphone service as well. Once

the FCC establishes the policy parameters for Dataphone, including the crucial question of the exclusion of AT&T, TRT is prepared to move forward.

TRT responds as follows to the specific matters specified in the Notice of Inquiry:

(a) Given TRT's exposure to date to Dataphone, it is not in a position to make meaningful specific demand estimates. Its inquiries to its present customers have disclosed a substantial interest in Dataphone with the usual qualifications that the service must be convenient and economical. But the customers have not been in a position to provide meaningful use estimates.

(b) TRT has no direct knowledge of the nature and extent of current public Dataphone use.

(c) TRT agrees for the reasons set forth by the COMSAT filings in Docket 19558 that Dataphone service is technically and operationally feasible via satellite.

(d) TRT believes that AT&T authorizations and tariffs should not be altered to permit AT&T to provide overseas Dataphone service. In this respect, TRT urges the continuation of the policy announced in the TAT-4 order.

(e) International Dataphone service or its equivalent should be provided by the international record carriers.

(i) It is not clear to TRT at this time precisely what the nature of interconnection would be between the international record carriers and the domestic networks. One possibility would be to model the arrangements on the existing telex system under which subscribers throughout the country would access a particular international record carrier by special access code. Another possibility would be for subscribers to access only the domestic networks with traffic delivered by the domestic carriers to the international carriers in accordance with the prescribed arrangements. Other variations of arrangements for interconnection are possible. Similarly, various possibilities are available for handling billing arrangements ranging from the telex model, in which domestic customers are billed directly by the international carriers, to the telephone model, in which the subscriber is billed for all calls by the local system to which his telephone is

initially connected. So far as division of tolls is concerned, this should initially be a matter of negotiation between the carriers involved following the determination of market structure by the FCC. Further policy directions from the FCC would be useful before efforts are made to particularize interconnection and operating arrangements in more detail.

(ii) TRT is confident that whatever operating arrangements are worked out between the international carriers and the domestic networks would yield a service as speedy and efficient as is technically possible at a reasonable cost to the customer. TRT believes that service quality would be enhanced if the international portion were provided by the international record carriers who will be motivated by the competitive spur and by the realization that, unlike AT&T, Dataphone will represent a very major portion of their total business volume.

(iii) The proposed financial and operating arrangements with overseas correspondents remain to be developed, but TRT foresees no

special difficulty in doing so once the Commission establishes the industry structure. In this connection, it is pertinenet that in most other countries the voice and record communication entities are the same. Thus, the international record carriers have experience in dealing with the foreign administrations that will be involved in the provision of Dataphone service.

(iv) TRT has not yet developed estimates of costs for providing Dataphone service.

(v) Similarly, TRT has not yet developed proposed levels of charges for Dataphone service.

(vi) In light of the foregoing, it is premature for TRT to estimate expected revenues from Dataphone service.

(f) No advantage in terms of operating efficiency would be gained if AT&T rather than the record carriers were authorized to provide Dataphone service. For the reasons indicated above, it may be expected that the international record carriers would have the greatest incentive to provide the utmost in efficient Dataphone service.

(g) TRT has not yet developed estimates of its additional circuit requirements for Dataphone services.

(h) TRT anticipates that the return from Dataphone services in the early developmental stages may be insufficient to fully cover revenue requirements, including those necessary to yield an adequate rate of return. It is anticipated, however, that Dataphone service is capable of being self-sustaining within a reasonable period of time. These comments are based on the assumption that all international record carriers will be authorized to provide the service. If the Commission should conclude that the economics of the service warrant authorization of some but less than all international record carriers to provide Dataphone service, TRT then submits that the choice of which carriers to authorize must be based primarily on the potential impact on the carrier being excluded. In this connection, the larger carriers would be far better able to survive profitably if limited to their existing business than would a smaller carrier like TRT, much of whose existing business derives from the Latin American area which is less developed economically and more volatile politically. Accordingly, if any international record carrier is authorized to provide Dataphone service, TRT must be

authorized to do so. We simply add that for the reasons stated above AT&T should be precluded from offering this service internationally.

(i) The public convenience and necessity would be served in several ways if the international carriers as a group were authorized to provide overseas Dataphone or equivalent services. In the first place, this would permit expansion of service presently available to customers within the continguous 48 states, Alaska, Hawaii, and Canada. Second, the availability of the service would facilitate international dealings between citizens of the United States and those of other countries by enabling the more rapid and efficient use of communications facilities. TRT is aware of no factor which would argue against the expansion of Dataphone service internationally.

Respectfully submitted,

TRT TELECOMMUNICATIONS CORPORATION

By T. Ray Cary

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January 12, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19558

COMMENTS OF
RCA GLOBAL COMMUNICATIONS INC.

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19558

COMMENTS OF RCA GLOBAL COMMUNICATIONS, INC.

RCA Global Communications, Inc. ("RCA Globcom") hereby submits its comments in response to the Commission's Notice of Inquiry, released July 31, 1972 (FCC 72-673), into whether switched voice/data and data-only services should be authorized between the United States and overseas points, and which carrier, or carriers, should be authorized to provide these new international record services.

A. Introduction and Policy Recommendations

Today, the international voice/record carriers provide competitive leased channel voice/record services, data-only services, telex service and telegram services. They have a long history of offering service improvements and innovations, competitive rate reductions and numerous other public benefits. Clearly, they must and should provide international switched voice/data and data-only services to insure those public benefits for the future.

The fundamental issue presented by this Inquiry is whether the Commission should also authorize American Telephone and Telegraph Company ("AT&T"), with its enormous financial resources and other monopoly advantages in both domestic and international communications, to invade the field of switched voice/data, data and facsimile services between the U.S. Mainland and overseas points. We submit that such an expansion of AT&T's already demonstrably dominant position in domestic and international voice communications would irreparably impair or destroy the viability of the international voice/record carriers and would promote an AT&T monopoly in international communications. Such an authorization would also conflict with already established Commission policy to foster meaningful and real competition, and would be contrary to the public interest.

Here, the international voice/record carriers once again find themselves in danger of being placed in a position where their future is threatened by the specter of AT&T entry into a field from which it has historically been foreclosed. AT&T already has a total monopoly over all voice message services between the continental United States and overseas points; it now seeks to extend its dominance into areas which the Commission has determined should be served by the international voice/record carriers.

We, therefore, deem it essential that the Commission continue in force, without any qualification, the policy against AT&T

offering international record services and refuse to countenance AT&T's expansionist designs on the international record field. Accordingly, RCA Glōbcom strongly recommends that the Commission authorize RCA Glōbcom and other qualified international voice/record carriers, and not AT&T, to provide overseas switched voice/data and facsimile services. Such a result is not only consistent with the established Commission policy to prevent an excessive concentration of control over communications facilities, but is absolutely essential to maintain the viability of the entire international voice/record carrier industry.

RCA Glōbcom further wishes to note that while this Inquiry is nominally addressed to "Dataphone" services, the determinations made as a consequence hereof can undoubtedly be expected to have a significant and far-reaching impact on the future development of the full spectrum of international switched voice/data and data transmission services. RCA Glōbcom accordingly urges the Commission to take into consideration whether the proposals submitted by respondents to this Inquiry look toward satisfying the long-term requirements of all segments of the data industry including those which will have a need for data-only services. We submit that the Commission should provide for the orderly development of international facilities designed expressly to meet expected demand both for switched voice/data services and for switched high-speed data transmission services. RCA Glōbcom therefore

further recommends that the Commission adopt a policy which will promote such objectives in the public interest.

1. The Public Interest Requires That AT&T Not Be Authorized To Provide Overseas Switched Voice/Data and Data-Only Services.

In formulating its policy herein, the Commission is confronted with various issues raised by AT&T's potential entry into this record market. The impact of such entry, as stated above, poses a real and subsisting threat to the very existence of the international voice/record carriers. If AT&T were allowed entry, with its vast resources and dominance in both domestic and international communications, it would obtain the great majority of this record business at the expense of the international voice/record carriers. It is our position that the Commission needs to determine, as it has in similar situations in the past, that the continued viability of the international voice/record carriers is in the public interest and such public interest requires that AT&T be restricted from entering the new fields of overseas voice/data and data-only message services.

It is accepted that total revenues from any new communications service are composed of a combination of new business and a shift from existing services. There is no question but that the implementation of overseas switched voice/data services via the overseas telephone network will have an adverse affect upon other services now provided by the international voice/record carriers. The present overseas Datel service, with its restriction on voice use,

could not be a commercially-attractive offering. The market for international telex service would also be eroded inasmuch as information now carried by international telex facilities will likely shift to the high-speed switched data services. To allow AT&T entry into this market for such new services which can be expected to impact such important existing services is tantamount to insuring the inevitable undermining of the international voice/record carrier industry as it now exists.

In weighing the consequences of any further expansion on the part of AT&T and the possible impact on the international voice/record carriers, the Commission also should give due consideration to the fact that AT&T already dominates international voice communications over and above its overwhelming position in domestic voice and record communications.

The Commission should take note of the fact as shown in Figure 1 that the revenues of the overseas telephone carriers are growing much more rapidly than those of the international voice/record carriers. In twenty-two years, revenues from overseas telegraph services increased by 298 percent. In sharp contrast, revenues derived from overseas telephone services increased by 2733 percent. Despite the Commission's 1964 decision to keep AT&T out of the international

leased voice/record channel market (37 FCC 1151), telephone company overseas revenues surpass record revenues by about 50 percent.

In 1960 the international voice/record carriers reported total revenues of approximately $87,000,000; in 1972 their revenues were approximately $227,000,000, an increase of 160 percent. By comparison, overseas telephone revenues (including Hawaii and Puerto Rico) in 1960 totaled approximately $49,000,000 and by 1972 increased to $340,000,000, a gain of almost 600 percent. As can be seen from Figure 1, the monopoly overseas telephone business has been obtaining a dramatically greater share of the international market over the years. Monopoly telephone revenues now equal 60 percent of total revenues from overseas communication services.

Even without overseas Dataphone, AT&T's dominant market share is expected to continue to burgeon. Thus, while approximately 40,000,000 overseas telephone calls were made in 1972, AT&T projects total calls in the area of 200,000,000 by 1980, an increase of 400 percent--far exceeding the more modest growth foreseen in record communications. The impact of AT&T's invading the record field is clear. Bluntly, it would serve to encourage, and perhaps ultimately ensure, a monopoly position in international record as well as voice communications.

In the landmark TAT-4 Decision, 37 F.C.C. 1151 (1964), the Commission determined that the public interest would not be served by allowing AT&T to provide leased circuits for alternate voice/record ("AVR") use in competition with the international record carriers. The Commission stated:

> "The use by customers of leased circuits for alternate voice-record use is, with the exception of the defense agencies, a new service. It is in its infancy, and we do not feel that we should jeopardize the opportunity of the record carriers to provide such services by also allowing AT&T, with its huge resources, as compared with those of the record carriers, to compete with such carriers in providing the service. A realistic appraisal of the relative capabilities of AT&T and the record carriers to secure and maintain such business leads us to conclude that AT&T's entry into this service would seriously jeopardize the ability of the record carriers to obtain a meaningful share of the business.*** It is in the public interest that we assure the viability of the record carriers by protecting them from the losses they would inevitably suffer were AT&T permitted to provide this voice-record service. These losses could affect their ability to continue to provide the still important oversea message telegraph service at anything approximating current rates." (37 F.C.C. 1158-9).

We submit that the fundamental rationale of the TAT-4 Decision is equally applicable to the provision of international demand data and facsimile services. The services in question are new record services which will markedly impact existing services of the international voice/record carriers and it is in the public

interest to avoid losses to these carriers which affect their ability to continue to provide their other overseas services.

This point was stressed by the Intragovernmental Committee on International Telecommunications composed of representatives from the Commission and the Justice Department, as well as other agencies, in its review of the effect of competition between AT&T and the international voice/record carriers. The Committee stated:

> "Although the record industry as a whole is presently operating profitably, it is uncertain if it can continue to do so unless restrictions on competition from AT&T are maintained...
>
> * * *
>
> "There are indications that demand will build up in the next ten years for a short-period voice/record service, such as dataphone or datex, to overseas points. In view of the considerable number of dataphone instruments that are now in use by AT&T subscribers domestically, a general overseas service of this type by AT&T could adversely affect the demand for similar services of the record carriers as well as for their telex and possibly their message telegraph services" (pp. 24-25).

In acting upon various AT&T applications in recent years, the Commission has also relied upon the "unequivocal assurance of AT&T that it has no intention to enter into and, in fact, has a 'desire to stay out of the international record field.'" (38 F.C.C. 1222, 1224 (1965)). The Commission has further stated as a general

principle that "normally we have not licensed AT&T to provide overseas record services." (2 F.C.C. 2d 573, 576 (1966)).

With regard to the provision of record traffic between Hawaii and the Mainland which has been described by the Commission in the past as a special exception to its normal policy, the Commission has recently noted that the rationale for the grant of authority to the telephone carriers for such services no longer exists. Thus, in its Memorandum Opinion and Order of November 8, 1972, FCC 72-998, the Commission stated (page 8):

> "It is relevant to note that subsequent events did not substantiate AT&T's pessimistic view of the situation. Traffic grew very quickly and a second cable was laid in 1964. We now have satellite facilities providing well over 200 circuits and an application for a third cable is pending. Under these circumstances, the reason for permitting AT&T...to provide <u>any</u> type of record service no longer obtains."

The Commission has also emphasized in other recent major decisions that the public interest is not served by competition between AT&T and significantly smaller entities or by extensions of AT&T's dominance into related fields.

In its Final Report and Order in Docket No. 18509, 21 F.C.C. 2d 307 (1970), the Commission stated:

> "...we cannot condone...policies which result in denying others the opportunity to also enter the new and emerging markets for facilities and

> services. We believe that the public interest in modern and efficient means of communications will best be served, at this time, by preserving, to the extent practicable, a competitive environment for the development and use of broadband cable facilities and services and thereby avoid undue and unnecessary concentration of control over communications media..." (21 F.C.C. 2d 325).

And in its Second Report and Order in Docket No. 16095, 37 F.R. 12312 (1972), the Commission said:

> "...the incentive for competitive entry...to develop specialized markets must be meaningful and not just token. This requires that we take appropriate measures toward the end that a reasonable opportunity for effective entry is not defeated or weakened by A.T. & T... In this regard, we cannot ignore the effects upon achievement of our objectives that might result from A.T. & T.'s existing economic strength and dominance stemming from its multibillion dollar terrestrial investments and operations and its permeating presence and influence in all domestic communications markets.
>
> * * *
>
> All of the foregoing factors and concerns with respect to A.T. & T., in our judgment, might well result in discouraging or deterring others from attempting to penetrate the markets for specialized services. As a further consequence, A.T. & T.'s dominance in the communications field would be extended rather than lessened in the domestic area. This would derogate from our policy of seeking to promote an environment in which new suppliers of communications services would have a bona fide opportunity for competitive entry. This policy was the basis for our decision in the Specialized Common Carrier Services proceeding (29 FCC 2d 870)." (37 F.R. 12313).

This policy has been reaffirmed by the Commission in its latest Order in this Docket, released December 22, 1972, FCC 72-1198:

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> "....in our judgment, the public benefits to be anticipated from...an enhanced opportunity for other...entrants to develop the competitive specialized markets and for users to have 'a wider range of choices as to how they may best satisfy their expanding and changing requirements for specialized communication service' (Specialized Common Carrier Services, 29 FCC 2d 870, 909-910)--outweigh any inconvenience to AT&T as well as its bare assertion of temporary drawback to its customers." (para. 27, page 16).

It is our contention that in line with the Commission's policy as adopted and followed in the above-cited decision, it is the public which stands to benefit by the fact that the new services to be offered will be provided in an atmosphere where real competition is possible. Certainly no such benefit, i.e. no real competition could take place, were AT&T to be allowed entry into this new market.*

We respectfully submit that the Commission's policy to foster meaningful competition would be seriously impaired if AT&T were allowed to enter into this market on the basis that in some way such 'competition' would be beneficial. We contend that the

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*As the Commission has recently stated, the existence of competition has resulted in "considerable benefit in the way of better service, responsiveness to public demand, and generally lower rates with substantial increases in volume and often profitability." (Memorandum Opinion and Order of November 8, 1972, FCC 72-998, page 8).

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opposite is the case; that is, that competition for such services would be destructive by its very nature regardless of the intent or attitude of AT&T itself.

As was pointed out by the Commission in the TAT-4 Decision cited above, AT&T's entry into the leased alternate voice/data market would have prevented the record carriers from obtaining a meaningful share of the business; hence, the Commission ruled that AT&T should not be authorized to offer this service in the future. With the expected growth of the switched voice/data service as a viable market for the record carriers, the same considerations militate against AT&T's entry into this market.

The international record carriers would find themselves 'competing' with a carrier which already has an established international telephone network which could be immediately utilized for various types of voice/data calls and could, therefore, readily initiate a marginal data service without incurring the necessary start-up expenses required by the record carriers. AT&T would also be able to rely immediately on its large numbers of technical and marketing forces which are widely distributed and vastly outnumber those of the international voice/record carriers. It also has the indisputable advantage that its underlying strength--its financial resources--are based on its domestic monopoly position.

In addition to its domestic influence, AT&T has an international monopoly on all voice message services between the continental United States and overseas points. It occupies a dominant position in all existing and proposed submarine cable systems landing in the United States. AT&T also has established relationships with the entities operating the foreign telephone networks which places it in a superior position in negotiating arrangements for extending its existing message voice service to the message data field. There is realistically no real opportunity for an international record carrier to compete on even or near-even terms with AT&T. Its world-wide size and strength is too much for the record carriers to be reasonably expected to overcome. In our opinion, therefore, there is a clear and convincing need here for the Commission to distinguish between competition among relative equals and competition with the Bell System.

Even if AT&T did not enjoy the foregoing favorable circumstances, the voice/record carriers would still be at a marked disadvantage in competitive efforts if only because their costs would be higher because of domestic payout charges to AT&T on calls initiated by Dataphone subscribers. Since AT&T by one means or another could minimize this added cost, it would have an additional advantage over the voice/record carriers.

We submit that one of the Commission's goals should be to foster the orderly development of international facilities to meet the demand for switched voice/data services in such a way as to ensure meaningful competition among the international voice/record carriers for such services. Therefore, the Commission should adopt a policy which would encourage equality of opportunity among the international carriers and prevent any further lessening of competition.

The economic well-being of AT&T has certainly not been adversely affected by the TAT-4 and subsequent Commission decisions prohibiting AT&T from providing overseas record services, nor is there any reason to believe that AT&T's revenues would suffer if it is prohibited from competing with the voice/record carriers for the provision of international switched voice/data and data-only services.

In 1963 the Bell System's overall revenue was $9.6 billion and its revenues from overseas service was $65.5 million. In 1972 the estimated revenues of the Bell System were $20.5 billion and its estimated overseas revenues were $298 million.

Moreover, AT&T will derive additional revenues from the domestic portion of the interconnected overseas service and we

respectfully submit that the Commission's reasoning in the TAT-4 Decision is accordingly applicable to the instant fact situation: "It should be pointed out that in any event, AT&T will be playing a part in providing, and deriving revenues from, this new service." (37 F.C.C. at 1160).

2. The Public Interest Requires The Development of Facilities Expressly Designed For Switched Data Use.

International telephone trunks were never designed specifically with data transmission requirements in mind.* At best, therefore, the superimposition of data transmission services on the public telephone network is an interim arrangement. The proposals contained herein, on the other hand, contemplate the effective development of a well-conceived overseas switched data transmission system which will meet the long-term communications requirements of both voice/data and data-only users in the United States and abroad.

As the Commission has recognized, there presently exists a growing interest in the availability of facilities for the international transmission of data and facsimile communications alternately

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*The inadequacy of facilities designed primarily for telephone use as a data transmission medium was underscored by the position taken by the CCITT-U.S. Study Group on Data Transmission (See Minutes of its October 17, 1972 meeting and proposed U.S. contribution on the subject "Integrated Services Digital Network").

or simultaneously with voice on a call-up basis by means of interconnection with switched communications networks in the United States. RCA Glōbcom is ready, willing and able to provide these services to the public. We propose to utilize a technically-advanced computer-based switching system which will interface the domestic and overseas portions of the through voice/data transmission. Until the automatic data switch becomes operational, service will be provided on an interim basis with operator assistance similar to the method employed in handling the existing overseas Datel service.

In addition to meeting the needs of users whose requirements are mainly for voice/data services, the RCA Glōbcom computerized data switching system is being designed to serve users whose needs are for data-only communications. When new domestic digital switched networks come into existence, RCA Glōbcom plans to interface with these networks. Similarly, RCA Glōbcom will interface with foreign data networks such as those currently operating or planned within France, Germany, Spain, the United Kingdom and other European countries.

Since we possess the necessary capability to satisfy existing and future needs for overseas demand facsimile and data services, RCA Glōbcom submits there is no reason for permitting

AT&T to furnish like services. Only with the threat of AT&T entering this field removed can RCA Globcom and other carriers fully develop this new market in furtherance of the Commission policy to provide "a business climate conducive to the improvement of existing services and institution of new services..." (Mackay Radio & Telegraph Co., Inc., 26 F.C.C. 557, 563 (1958)).

B. Historical Background of International Data Transmission

In 1964, RCA Globcom introduced international "Datatelex" service (subsequently renamed "Datel"). This service is now provided by several U.S. international voice/record carriers, in some cases using overseas facilities shared on a time basis. RCA Globcom pioneered international Datel with the expectation that the field of high-speed, call-up switched data service would ultimately become a major segment of the international record communications market.

Within the United States, in addition to AT&T's Dataphone service, a switched data service is provided by The Western Union Telegraph Company ("WU") known as Broadband Exchange Service ("BEX"). Direct interconnection between the international and domestic services has heretofore existed only in the case of WU's BEX, as AT&T has only recently agreed to electrically interconnect its Dataphone subscribers to the international record carriers.

While international Datel service has been available for a number of years, the potential market for this business is still relatively unexploited. The growth of international data and

facsimile transmission service has been impeded by several factors. Among these are the slow growth in the use of computers and sophisticated business machines in locations outside the United States and AT&T's previous refusal to permit the interconnection of its Dataphone service with the Datel centers of the international record carriers and thereby facilitate international transmission of data to and from points in the contiguous 48 States.

It should also be noted that much of the traffic currently carried by international Datel service is not computer-produced or business machine-produced data. Instead, Datel is used by many subscribers as an inexpensive substitute for telegram or telex service.*

Another problem affecting the provision of international data transmission service is the question of data transmission

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*These users will stockpile a days' traffic and transmit it in the form of a single high-speed Datel connection.

equipment on customer premises. There are many models and types of data transmission gear available. These units vary with respect to operating speeds, code levels and error correction capabilities. Some are suitable only for effecting efficient transmission via underseas cables and cannot be used satisfactorily on satellite circuits.

A corollary to this problem is the compatibility of equipment at distant ends of the circuit. Obviously, any two customers with similar equipment can effect data transmission calls, but customers with dissimilar equipment cannot communicate. Therefore, unlike the international telex network where common standards are observed throughout the world, the switched data network had been thus far limited in its efficiency by virtue of the dissimilarity of equipment and standards presently in use.

The system which RCA Globcom is proposing herein will attempt to alleviate these obstacles to effective international switched data transmission service through technological improvements which will permit, among other things, the connection of dissimilar data terminals and assure that the most suitable international facility--cable or satellite--is made available.

C. System Description Of Proposed RCA Glōbcom Switched Voice/Data Service

The plan for this service is to provide initially for interconnection capability to existing domestic and foreign switched telecommunications networks in order to provide the overseas transmission facility. RCA Glōbcom will provide superior transmission capability, as well as special customer features heretofore not available.

These new enhancements will be responsive to the anticipated requirements for overseas data and facsimile services, alternately or simultaneously with voice, which cannot be adequately met by existing private line and Datel services. Under existing voice/record services, customers are limited, in the case of private line service, basically to point-to-point service, and in the case of Datel, to voice communications solely for coordination of the data transmission.*

In addition, when domestic and overseas digital switched networks come into existence, RCA Glōbcom plans to interface with these networks to accommodate data users whose requirements are

*Alternate voice use in connection with overseas Datel service has been authorized only between the U.S. Mainland and Hawaii, 2 FCC 2d 573 (1966).

for high-speed data services only.

Figure 2 attached hereto illustrates the broad system overview. As shown, a typical data user in Chicago will be able to call the desired party in Paris. The call may be routed over the DDD network of AT&T, WU's BEX and/or other data networks into RCA Globcom's computer-based system. From this point, the call will be established via the overseas switching center to the final user location in Paris.

Figure 3 shows the proposed system to be used between U.S. data users and overseas data users.

Figure 4 shows the initial computerized system plan which RCA Globcom proposes to offer to the public.

This system will have three main entrance points for outbound transmissions from the United States. The first is the entrance from the domestic switched networks (AT&T, WU etc.) where subscribers will have the capability of dialing into the RCA Globcom switch to route their call overseas.* The second point of entrance into the switch will be from RCA Globcom's customers in the metropolitan areas in which we operate who will have direct access

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*We would propose that this interconnection be accomplished on a four-wire full-duplex basis.

into the switch without going through a connecting domestic system.* The third entrance into the switch will be for those data terminals that will not require any voice coordination, such as high-speed telex or other similar types of data equipment.

Regardless of the method of entrance into the switch, the switch will route the call overseas to the foreign terminal via overseas trunk bundles using circuits specifically conditioned for high-speed data transmissions. At the overseas site, the call will be routed to its ultimate destination through the facilities of our foreign correspondent.

All calls routed into the United States will enter through the RCA Glōbcom switch which will then select the path for transmission to the ultimate user. For AT&T Dataphone or WU BEX subscribers in the 48 contiguous States, the call will be routed to the proper AT&T or WU switching center for ultimate connection to the called party. In the case of an RCA Glōbcom subscriber in a city in which we operate, we will route the call to the subscriber over direct tieline facilities.

In the initial configuration (Figure 4), the computer will be used as a common control device to access and control an

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*RCA Glōbcom will be connecting these customers on a four-wire full-duplex basis.

analog space division matrix. The space division matrix will permit the United States users to be interconnected to the overseas point with the computer setting up the outbound connections from the United States. As part of the computer, scanners and registers will monitor and service all lines. The computer will then establish the connections necessary to route the call to the overseas point, as well as commence the billing/accounting for the calling subscriber (i.e. for outbound calls).

RCA Globcom intends to provide the following initial services to the public:

1. Alternate and Simultaneous Voice/Data (Realtime). This service will be provided utilizing voice/data terminals, data sets, and other commercially available voice/data terminal gear.

When a user who is not a direct RCA Globcom subscriber places an overseas call from the 48 contiguous States, the call will initially be routed over a domestic switched telecommunications network of his choice to the RCA Globcom computer-based switching system. The RCA Globcom switching system will then select the appropriate route for the call (either satellite or cable, if this is a unique requirement for the user) and ensure that the correct channel conditioning is provided for the subscriber.

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Normally, voice will be used to coordinate and confirm the data transmission before and after data transmission takes place. RCA Glōbcom will utilize voice/data detectors at the computer-based switching system to monitor and control the parameters on the channel that can affect the quality of transmission. For those terminals that do not require voice coordination, the data terminal equipment will coordinate via an intersignalling "handshake," and then commence data transmission.

2. Data Transmission. Data transmission facilities will, initially, be offered with compatible data terminals at each end of the system. RCA Glōbcom will provide full-duplex transmission capability over the circuits for which it will maintain responsibility, subject only to those limitations imposed by the domestic switched network and the overseas switched network.

The initial services that will be offered by RCA Glōbcom will be superior to presently existing services in this area, since RCA Glōbcom will maintain complete end-to-end coordinating responsibility for the call.

As an additional feature RCA Glōbcom will offer, where the customer wishes, to take the data stream and reshape and retime the data at the computer-based switching center.

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By using the computer as a common control and a time division path the computer will regenerate and bring up the best quality signal possible for overseas transmission. Utilizing this technique, we will be able to transmit data in a more stable and consistently accurate form than is presently available. In addition, it will also be possible to use a different type of modem as required by the overseas customer. For example, if a United States user has a modem which is dissimilar to the overseas modem we can still complete the call and have meaningful transmission if we transmit from the RCA Globcom side of the computer to the overseas point through a modem which is compatible to the overseas modem. In other words, this configuration will permit the connection of different data sets.

The following options, which are not available to the present users of AT&T's Dataphone service, will be offered for users of the proposed RCA Globcom system:

1. Code Conversion to/from Non-Identical Equipment. RCA Globcom, at the customer's request, will provide suitable buffers and code conversion equipment, which will be switched into the transmission path on a programmable basis. The code conversion equipment will enable users at each end of the call in progress

to use dissimilar formats. Examples are:

5 level Baudot to 8 level ASCII
8 level ASCII to 5 level Baudot
6 level typesetter to 7 level IBM

These services will be provided for all interconnections to the domestic switched networks presently in existence. In addition to this feature, when newly planned domestic digital or analog networks become operational, RCA Globcom will provide the suitable interface to these networks.

2. Speed Conversion. Speed conversions from dissimilar data machines will be available, on a programmable basis. Where required, data bit "stuffing" and/or storage capability will be provided to enable these data machines to operate with each other.

In general, RCA Globcom's offering will provide superior features since we will not "back-off" the connection once it is established, but will continue to monitor the transmission automatically for quality while the call is in progress. As a customer option, data will be regenerated at the computer-based switching system so that improved transmission quality is obtained compared to the presently existing analog network connection (without data regeneration) offered by AT&T.

3. Overseas Conditioned Channels. All overseas channels

will be properly conditioned to meet presently existing and subsequently developed international specifications.

4. Cable Or Satellite Selection. The proposed RCA Globcom computer-based switched voice/data service contemplates use of both cable and satellite channels to form the intercontinental transmission medium.

RCA Globcom will provide the programmable capability to select the most desirable transmission path for the overseas call. In the case where a satellite path may not be desirable (e.g., where "double-satellite" hops may be encountered), we will ensure that a cable circuit for the overseas path will be selected where available.

In determining the relative effectiveness of providing switched voice/data service on satellite as compared to cable, it is necessary to consider, first, the parameters affecting reliability and, second, those affecting operational feasibility.

As far as reliability is concerned, a satellite channel can perform on an equivalent basis with a cable channel. Both satellite and cable channels are made up of various links which include terrestrial facilities. From data tests performed throughout the world utilizing both types of facilities, the bit error rates and information throughputs are basically the same.

In comparing the parameters affecting operations, the most important factor is the propagation time of the satellite channel vs. the cable channel. The most common error detection and correction systems which operate on block acknowledgement before proceeding principles, find difficulty in meeting the longer propagation parameter of the satellite channel. Two results usually occur; namely reduced information throughput or non-operation of the system.

As far as switched voice/data service is concerned, RCA Glōbcom is prepared to offer a system that enables the subscriber to interface internationally via the best facility possible.

Other features of the RCA Glōbcom proposed system include:

1. Separate Switching Path Through the Computer. Depending upon the transmission requirement, a separate switching path will be initially provided in the RCA Glōbcom system so that when voice/data is offered, there will be separate paths for voice and data. As new services become available, new switching paths (either space division or time division paths) will be provided.

2. Uni-Code Addresses. All users of the system will be treated as Uni-code users. Several types of Uni-code addresses will be available.

a. Single Addresses - This type of address will enable a user to call a number of predetermined destinations, each being called by a separate address. This address will require fewer characters than the full address, utilizing the computer program to perfrom this function.

b. Group Address (Conference Address) - This type of address will enable a user to call one or more groups of predetermined destinations, each group being called by a separate address. These addresses will require fewer characters than the full address, with the computer programmed to perform these functions.

Utilizing the Uni-code address concept, it will be possible to send the same data to more than one destination either sequentially or simultaneously.

3. Multi-Address Calling Facility. The computer-based switching system will have the capability of routing the call to more than one destination. Various methods of setting-up these calls include:

a. by group direct call;

b. by utilizing special abbreviated addresses.

4. Deferred Data Mode. An automated deferred data mode will be provided. This capability will provide for store and forward

of data at a later time, to one or more addresses as requested by the user.

5. Camp-On. On calls originating in the United States, camp-on will be provided to hold the calling party on the line for a limited time while attempting to set up the call, in the event a busy link or channel or subscriber is encountered. In addition, on a programmable basis, it will be possible to store the called address and retry setting up the call at a later time, for those users who will require this type of service.

6. Unauthorized Use or Calls Placed in Error. The system will be programmed to prevent unauthorized use and to stop calls placed in error from being set up.

Each caller will be required to transmit, as part of the address, its own unique calling identification number. The look-up directory tables stored in the RCA Globcom computer will then verify that a valid call is being placed. Upon request by the calling subscriber or RCA Globcom this unique identification code will be changed so that unauthorized use will be kept to an absolute minimum, or be entirely eliminated.

D. Comparison of RCA Globcom Switched Voice/Data Service with AT&T Dataphone Service

The following compares the domestic Dataphone service with RCA Globcom's proposed method for providing international switched voice/data service.

1. Among the disadvantages of using Dataphone for a data call are:

a. Only a connection is provided. The carrier "backs-off" the circuit after the call is set-up.

b. The system basically is geared to serve voice users; international telephone trunks are not designed for data transmission.

2. Among the service advantages to the public to be derived from using the RCA Globcom computerized switched voice/data system are:

a. Conditioned overseas circuits.

b. Automatic identification of preferred facility routing, i.e., satellite or cable.

c. Excellent services available to data users by a carrier whose business is data; we will maintain test centers to handle customer data transmission problems and also provide interconnection with similar overseas test centers.

d. RCA Globcom also plans to offer:

i. code conversion;

ii. speed conversion;

iii. regeneration of data at computer for improved transmission quality.

e. Uni-code addresses to be available.

f. "Conference-type" calls to be available.

g. Deferred data mode and camp-on to be available.

h. Unauthorized users or calls set-up in error to be blocked.

i. Compatibility with expanded networks that are being established for switched data exclusively.

Until the automatic data computer switch becomes operational, RCA Globcom will provide overseas data transmission services on an operator-assisted basis. To provide for a more efficient data operator facility, present RCA Globcom facilities will be replaced by a Matrix Switchboard (Figure 5). This switchboard will have the capability for 48 in/out data circuits and will have a series of push buttons that will permit the data operator to quickly connect a United States subscriber to the overseas party. It is also planned, with the agreement of the overseas Administrations, to

allow the RCA Globecom operator to bypass the overseas operator by directly dialing through the overseas exchange to the called subscriber. In the reverse direction, with the implementation of the necessary interfacing devices, the overseas operator will be able to dial directly to any domestic data subscriber.

E. Interconnection and Operating Arrangements

1. Between RCA Globcom and Domestic Carriers. RCA Globcom has in effect an operating interconnection arrangement between WU's BEX and our overseas Datel service that permits customers to direct dial into our Datel centers for electrical through connection to their overseas offices for data communications. A similar arrangement is planned with AT&T's Dataphone service.

We foresee no technical or operational problems in interfacing our proposed switched voice/data system with either WU's or AT&T's existing facilities or other existing or planned networks.*

2. Between RCA Globcom and Overseas Correspondents. Operating and settlement arrangements with our overseas correspondents would be the same as those under our existing authorized Datel service.**

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* We would propose to accomplish this on a trunk basis.

** We now provide Datel service with the following foreign points: Australia, Austria, Belgium, Denmark, France, Germany, Hong Kong, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom.

F. Expected Public Demand for Switched Voice/Data Services

1. The International Data Communications Market.

A precise forecast of the size of the international switched voice/data market in terms of calls and minutes at this juncture is somewhat speculative.* Nevertheless, substantial evidence to support the projected growth of international switched voice/data services can be found from available research material on this subject.

In evaluating the extent of potential demand for international switched voice/data services, we have carefully reviewed and analyzed various studies available to us including the recent study of the data communications market in the United States

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* As the Commission noted in the Specialized Common Carrier Inquiry, 29 FCC 2d 870, 919 (1971): "We do not rely on any particular market study as reflecting the probable extent or precise nature of the potential market. It is not essential to our policy determination here to make findings as to the exact size of the potential market.... Factors of this kind do not lend themselves to precise prediction.... That the applicants perceive and are concentrating upon different forms of potential growth is a proper exercise of entrepreneurial discretion in a competitive arena where the potential market is characterized by diverse user demands and requirements."

prepared by Frost & Sullivan, Inc. (December 1972).* This publication, as in the case of numerous other ones preceding it, projects an explosive growth of data terminals and modems through 1980.

Frost & Sullivan shows the following expected growth in data terminals in the U.S.:

Year	General Purpose Computers in Use	% in Use With Terminals	No. in Use With Terminals	Average Terminals Per System	No. of Terminals In Use
1973	70,100	43%	30,100	24	720,000
1974	80,600	48%	38,700	25	960,000
1975	92,700	54%	50,000	25	1,250,000
1976	105,700	59%	62,400	26	1,620,000
1977	119,400	63%	75,700	28	2,120,000
1978	133,700	66%	88,000	30	2,650,000
1979	148,400	68%	100,000	33	3,300,000
1980	163,300	70%	114,000	36	4,100,000

(Source: Interconnect Market Study, 1972, Frost & Sullivan)

We also consider the modem market to be a significant yardstick since transmission of digital data over analog telephone facilities cannot take place without a modem.

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* In addition to the Frost & Sullivan study and the Arthur D. Little study cited below, other sources showing the growth of data communications are the Global Market Survey prepared by the U.S. Department of Commerce (September 1970) which provides basic information on electronic data processing equipment, peripheral devices and software; the International Data Corporation's May, 1971 study on the U.S. domestic data market; and a British Post Office study which forecasts a 400 percent increase in the number of data terminals in the United Kingdom from 51,000 in 1973/4 to 234,000 in 1978/9.

The following table shows Frost & Sullivan's estimates of the growth of the independent domestic modem population:

Year	Low-Speed Modems (to 300 BPS)	Medium-Speed Modems (to 4,800 BPS)	High-Speed Modems (Over 4,800 BPS)	Total No. of Modems
1973	273,000	36,000	8,600	317,600
1974	443,000	55,900	11,600	510,500
1975	643,000	82,900	15,600	741,500
1976	923,000	117,900	20,600	1,061,500
1977	1,223,000	154,900	26,600	1,407,500
1978	1,523,000	191,900	33,600	1,748,500
1979	1,813,000	227,900	41,400	2,082,300
1980	2,103,000	263,900	49,100	2,416,000

(Source: Telephone Interconnect Market Study, F & S, 1972.)

Significant growth in the number of such modems is also foreseen overseas. Expected growth in several of the European countries is depicted in the following extract from the Arthur D. Little study on World Communications released in 1972.

MARKET SUMMARY: NO. OF MODEMS (in thousands)

	1970	1975	1980
France	4.0	32.8	125.0
Italy	4.2	16.8	90.0
U.K.	19.4	147.1	353.1
Germany	2.8	52.9	313.0

(Source: Arthur D. Little, World Telecommunications Study, Page 136)

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In its First Report and Order in the Specialized Common Carrier Inquiry, 29 F.C.C. 2d 870, 905-906 (1971), the Commission citing various market studies, found that the market for data communications was growing rapidly with a very large potential market yet to be developed. Further, the Commission pointed out that the needs of data communications users may require different applications of communications technology and types of service to meet diverse and specialized needs associated with data transmission.

The number of AT&T Dataphone users in the United States has grown dramatically over the last five years and is expected to continue to grow through the seventies. It is worth noting that Dataphone service, after it was introduced in 1958, grew very slowly during the initial years. By 1963 there were less than 7,000 Bell System Data sets in service; today there are more than 200,000.

Interest in the data market has also been shown by our overseas correspondents. Last year, for example, an agreement was reached among a number of European nations to study data requirements in the years ahead. The major output from this work will include future data traffic flow between Europe and North America, but the initial results of this study will not be available until a later date.

According to Frost & Sullivan, present estimates show that about 35 percent of all computer installations in the U.S. are operating on-line with data terminals and it is expected that by 1980 at least 70 percent of all such installations will operate in on-line modes. While

the number of general purpose computers will triple by 1980, there will be ten times as many data terminals in use during the same period. Some four million data terminals are expected to be in use by 1980.

Frost & Sullivan states that data communications revenues in the U.S. are growing at the rate of 35-50 percent annually, making it the fastest growing segment of the communications business. By 1980, it is expected that data transmission time will quadruple and its revenue contribution to common carriers will rise to at least ten percent of total communications revenues.

It is interesting to note that the Frost & Sullivan study points out most users recognize the potential of advanced data communications applications, but are discouraged by present services of the domestic carriers because, inter alia, of limited selection and inadequate performance. Among the problems reported as having been experienced with existing domestic data transmission services by users were: lack of carrier responsiveness; insensitivity to customer needs; poor coordination with equipment suppliers; and inflexibility in design of services. Users also complained of poor service and maintenance of transmission equipment according to Frost & Sullivan. Users generally were of the opinion that unless data transmission becomes more flexible and reliable, vital data communication applications will be delayed. Suggested improvements include wider selection of services, better performance and more

responsive customer and field service by the carriers. We submit the foregoing reinforces the need for the improvements planned for the international switched data service by RCA Globcom and to have these new services provided to the public in a competitive market.

Additional factors bearing on expected growth of international data transmission are:

- The increasing number of computers equipped for transmission. As noted above, the Frost & Sullivan study indicates that about 35 percent of all computer installations now operate on-line and that by 1980 at least 70 percent of all installations will operate in on-line modes.

- Nearly 3,000 U.S. companies now have foreign subsidiaries throughout the world.

- Experts in the data field as well as a number of recognized consulting firms are in agreement that the international switched voice/data market will evidence rapid growth in the future.

Based on the foregoing, we are confident that the international switched data market will provide significant new business for the voice/record carriers.

2. Facilities for Implementation of Switched Voice/Data Services

RCA Globcom has an existing extensive worldwide communica-

tions network consisting of Intelsat-IV satellite facilities and cable circuits in modern cables such as TAT-5 and the Second Florida-St. Thomas Cable system. In addition, we have been authorized or have pending requests for additional circuitry in new high-capacity cable facilities such as TAT-6, CANTAT-II and the new Transpacific cable system which will be available to meet anticipated demand for overseas switched voice/data, data-only and facsimile services.

G. Impact on Revenue From Existing Services

While it is difficult to project with precision the size of the international switched voice/data market at the present time, based on the information available to us we believe this market will be substantial enough to support competition among the international voice/record carriers but not such to permit AT&T entry as well.

Today telex revenues account for approximately 40 percent of the overall revenues from overseas communications services of the international voice/record carriers. It is important to note that a 1200 baud service can carry up to 24 times as much information per minute as the 50 baud telex service.

It seems clear, therefore, that if AT&T is authorized to provide international Dataphone, the resultant shift from telex to its Dataphone service would seriously injure and ultimately destroy the telex service of the voice/record carriers. Such a result cannot be countenanced by the Commission.

To expose the international voice/record carriers to potential losses of this magnitude would be to run a risk which the public, which

has come to depend upon these carriers for essential services, cannot afford. To assure the continued viability of the international voice/record carriers, it is mandatory that AT&T be excluded from participation in the market for overseas switched voice/data, data-only or facsimile services.

It is equally difficult to quantify projected revenues available to RCA Globcom for switched voice/data services in light of the many contingencies which now exist. It must first be determined that:

- AT&T will not be authorized to provide any overseas switched voice/dat services.
- No restrictions will be placed on voice transmissions during data calls.
- RCA Globcom will be electrically interconnected with the AT&T domestic Dataphone system by mid-1973.
- Whether RCA Globcom will be authorized promptly so that it can operate in the automatic switching mode by 1975.

We are not in a position to determine the extent of our expected revenues from this service until the Commission first resolves to limit competition for this service to the international voice/record

carriers and to assure interconnection with the domestic switched communications networks on a fair and equitable basis.

We recognize that present international message telephone rates are somewhat lower than existing Datel charges. We therefore assume rate reductions in connection with the provision of overseas switched voice/data service so that the rates would be approximately the same for the two services subject to any special costs incurred.

However, the extent, nature and timing of reductions in rates for our proposed switched voice/data service necessarily depend on a number of factors including:

- The number and types of overseas data transmission systems authorized by the Commission;
- Economies to be realized from high-capacity facilities such as the CANTAT-II and TAT-6 cable systems and further reductions in satellite rates;
- New technological developments for the handling of data transmission;
- The volume of international data business; and
- Conclusion of appropriate agreements with our overseas correspondents.

With respect to costs of providing overseas switched voice/data service, we estimate the initial capital cost of the computerized switched voice/data equipment at $1.3 million. Depreciation would be computed on straight-line over a 10-year period. Anticipated switching equipment expenses are estimated at approximately $300,000 in the first year.

H. Conclusions

International switched voice/data service is clearly a record service which is in an embryonic stage. Nevertheless, there is every indication, as set forth herein, that there is a market for this record service large enough to support competition between the qualified international voice/record carriers. This market, however, is certainly not large enough to support such qualified international voice/record carriers and allow entry to AT&T which would undoubtedly siphon off most of the traffic. In any event, it must be emphasized that competition in this record field among the international voice/record carriers and AT&T as well would be destructive by its very nature and result in a serious diversion of record revenues from the international voice/record carriers which would surely undermine the economic viability of this industry.

AT&T's monopoly overseas message telephone services are growing at a rate of 20-25 percent annually resulting in an increasingly widening gap between international telephone revenues and combined record carrier revenues. By comparison, all international record services are highly competitive and revenues from the important telegram service have been declining annually since 1969 which decline has greatly accelerated in 1972. This situation has to date been offset by gains in international telex

service. The extension of Dataphone service, however, to overseas points will have a profound effect on future revenues from international telex, the international voice/record carriers' principal growth service, which could in no way be compensated unless the provision of the overseas portion of the switched voice/data service is limited to the record carriers. AT&T's entry into this record field would mean a loss to the international voice/record carriers of a substantial and vital part of their overall revenues.

It should further be noted that unless AT&T is restricted from the international market for switched voice/data services, it would not make economic sense for the record carriers to attempt to also provide these services. With AT&T's intrinsic advantages and domination of both the domestic and overseas markets, the record carriers would be in no position to justify the capital outlays necessary to provide and develop these innovative services.

We submit that the public interest thus requires that the Commission assure the continued viability of the international voice/record carriers by authorizing RCA Glōbcom, and other qualified international voice/record carriers, and not AT&T, to provide all switched overseas voice/data, data-only and facsimile services.

WHEREFORE, for the reasons set forth above, RCA Glōbcom

respectfully requests the Commission to authorize RCA Globcom and other technically and financially qualified international voice/record carriers, and not AT&T, to provide all overseas switched voice/data, data-only and facsimile services.

Respectfully submitted,

RCA GLOBAL COMMUNICATIONS, INC.

s/Francis J. DeRosa

s/Charles M. Lehrhaupt

Its Attorneys
60 Broad Street
New York, New York 10004

January 12, 1973

Figure 1

Overseas Communications Revenue

1951-1972 Inclusive

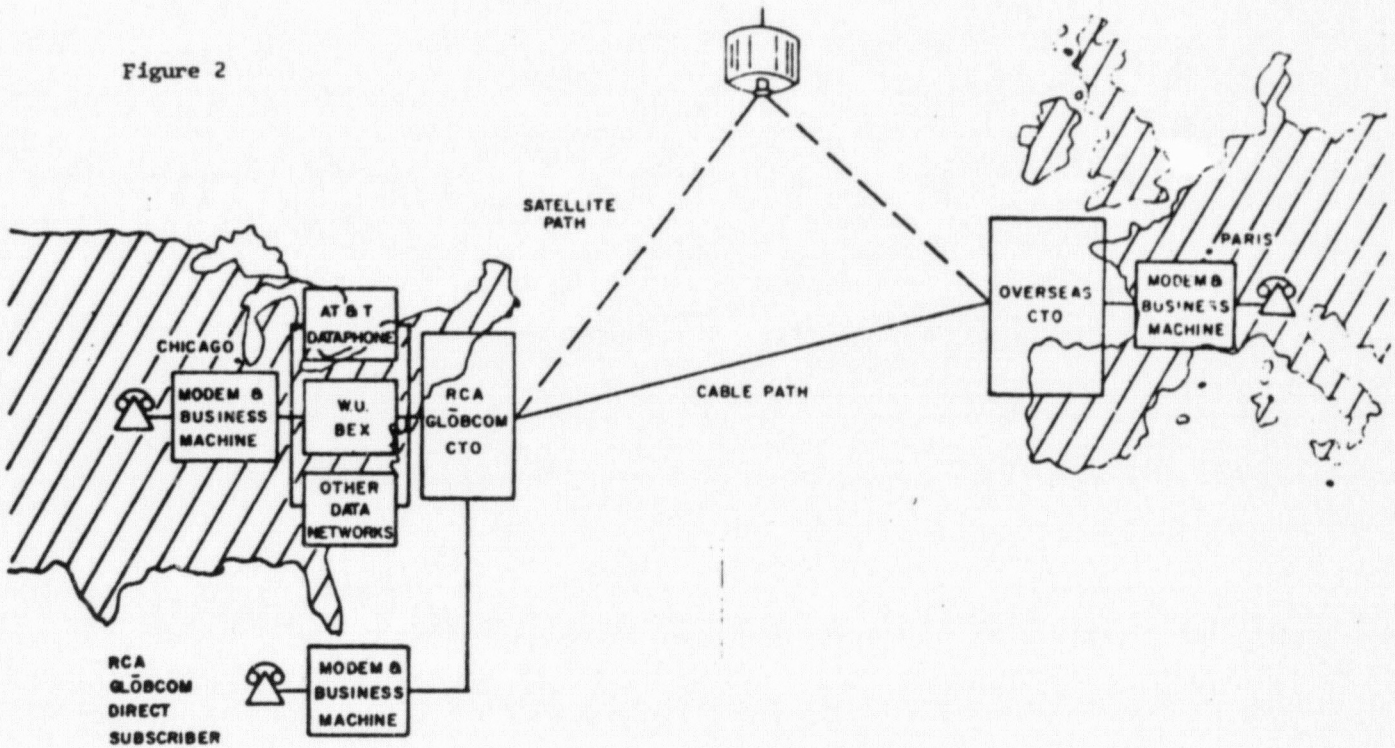
($Millions)

	Telephone Carriers	Record Carriers
1951	12	57
2	16	58
3	13	60
4	14	64
5	16	68
6	19	73
7	23	77
8	29	77
9	36	84
1960	49	87
1	61	90
2	73	92
3	82	98
4	99	108
5	117	107*
6	146	122
7	161	132
8	192	154
9	251	180
1970	268	194
1	302	206
2	340**	227**
% increase over 1951	27.33%	298%

*All America stopped reporting.

**Estimated.

Figure 2

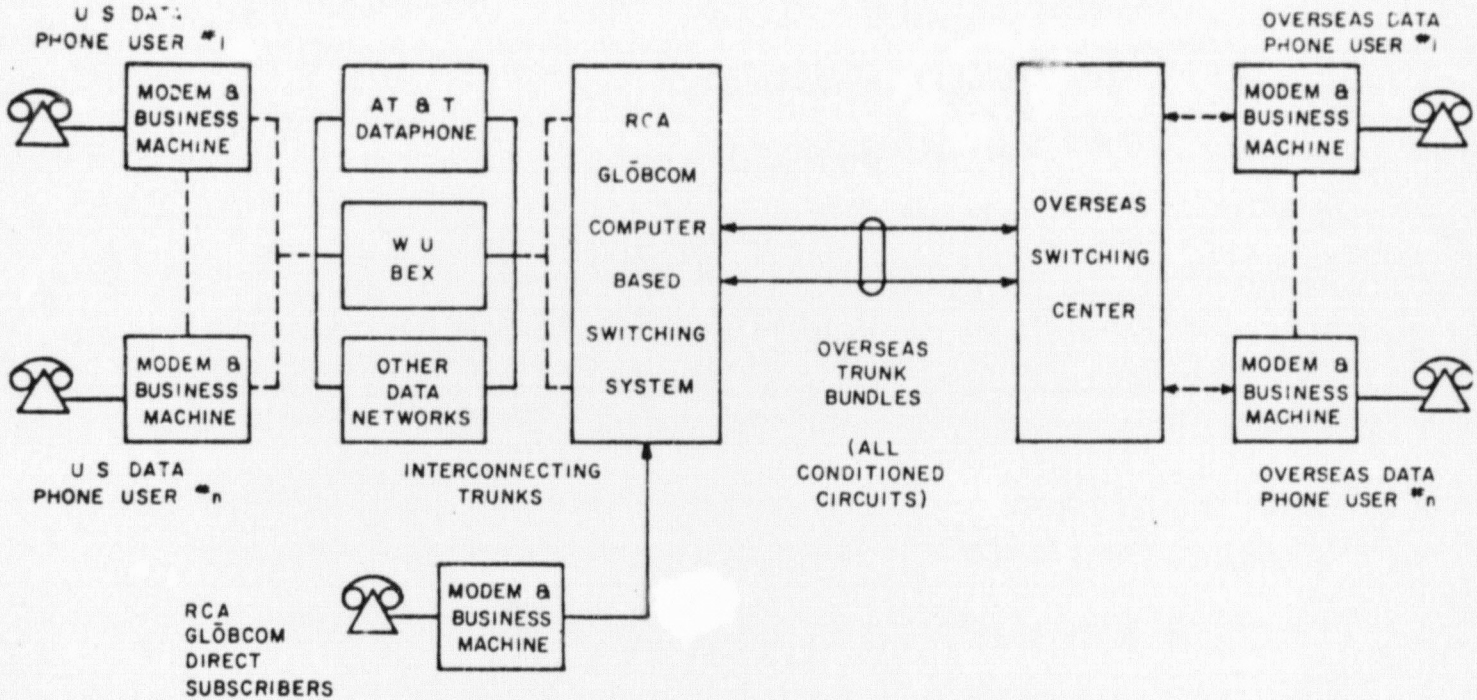


SYSTEM BLOCK DIAGRAM

RCA GLOBCOM COMPUTER BASED SWITCHED VOICE-DATA SERVICE

SHOWING INITIAL SERVICE OFFERING

Figure 3



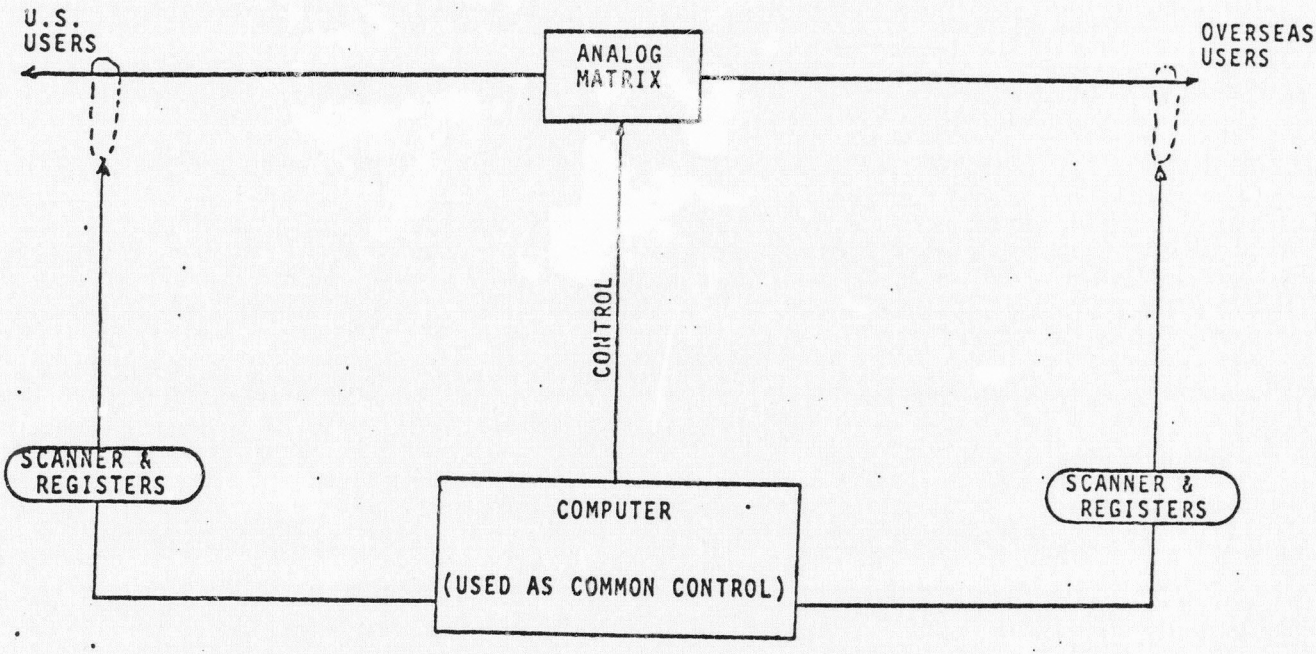
SYSTEM BLOCK DIAGRAM

RCA GLOBCOM COMPUTER BASED SWITCHED VOICE-DATA SERVICE

SHOWING INITIAL SERVICE OFFERING

A-238

Figure 4

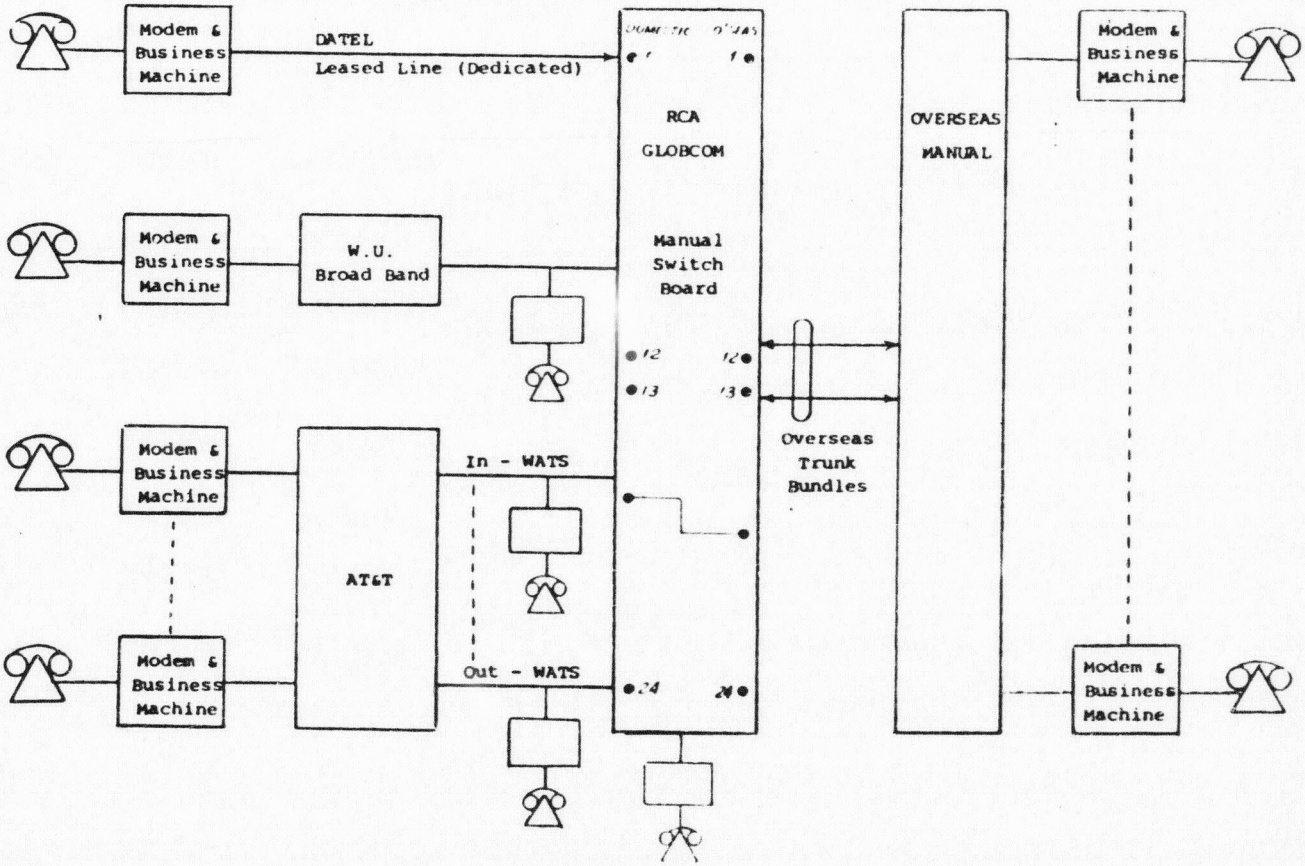


RCA COMPUTER BASED SWITCHED VOICE-DATA SERVICE
INITIAL SYSTEM PLAN

Figure 5

IMPLEMENTATION OF MANUAL MATRIX SWITCHBOARD

FOR DATEL & DATAPHONE



CERTIFICATE OF SERVICE

I, Audrey Gadson, hereby certify that on this 12th day of January, 1973 I mailed a copy of the foregoing "Comments of RCA Global Communications, Inc." in Docket No. 19558 by United States mail, postage prepaid, to the following persons:

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas data/voice demand service.	)))	Docket No. 19558

COMMENTS OF WESTERN UNION INTERNATIONAL, INC.

Ernest Brod
Howard L. Stevens

Its Attorneys

WESTERN UNION INTERNATIONAL, INC.

One WUI Plaza
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January 12, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas data/voice demand service.	)))	Docket No. 19558

COMMENTS OF WESTERN UNION INTERNATIONAL INC.

Western Union International, Inc. (WUI) respectfully submits the following comments in response to the Commission's Notice of Inquiry released July 31, 1972 (Notice):

1. While the Commission's Notice frequently uses the term "dataphone" as a shorthand characterization, it is important that there be a clear understanding of the service in question. "Dataphone" refers to a wide range of equipment available to users of the domestic public telephone network. The international data/voice/facsimile service at issue herein is "datel", an existing record carrier high speed data service, on a dial-up basis, with alternate voice capability presently limited to data coordination. It is only necessary for the Commission to modify existing international record carrier authorizations, so as to permit unrestricted voice communications combined with data and facsimile transmissions, in order to transform datel into the international data/voice demand service which is the subject of this proceeding.

2. The Commission should rule in this proceeding that the American Telephone and Telegraph Company (AT&T) -- and any of its operating arms -- must be permanently excluded from providing an international data/voice service on a dial-up basis, just as it is excluded from the alternate voice/record private line service. Such a ruling would conform to the views earlier expressed by the Commission, the Justice Department, the Defense Department, the State Department and the Office of Telecommunications Management to the effect that AT&T must be excluded from "short-period voice/record service, such as dataphone or datatex, to overseas points."*

3. A ruling that AT&T is permanently excluded from this service would also be consistent with AT&T's own commitments to stay out of this field. In the landmark TAT-4 decision which prohibited AT&T's participation in the alternate voice/record leased channel service, the Commission pointed out that "AT&T has stated several times in the past that it has no interest in entering the overseas telegraph field."** Similarly, the Commission later stated that it has "the unequivocal assurance of AT&T that it has no intention to enter and, in fact, has a desire to stay out of the international record field."*** Through the necessary domestic interconnection, AT&T will be assured of participating in revenues arising from the development of this service by the international record carriers.

*Report of the Intragovernmental Committee on International Telecommunications, April 29, 1966, pp. 24-25 and 28.

**American Telephone and Telegraph Company, 37 F.C.C. 1151, 1159 (1964).

***American Telephone and Telegraph Company, 38 F.C.C. 1222, 1224 (1965).

4. WUI's efforts, since 1965, to bring international data/voice demand service to the public confirm not only AT&T's disregard for the need for such a service, but also AT&T's obstruction to WUI's efforts. AT&T continually refused to permit interconnection into the domestic telephone network to enable WUI to provide even the restricted datel service.*

5. AT&T's tactics are all the more troubling since it is unclear whether AT&T's Long Lines should properly play any role in the interconnection decisions of New York Telephone Company (NYTelCo) or any other local arm of the Bell System.

6. While WUI's numerous interconnection rebuffs have come from Long Lines, it appears that the question of interconnection in New York City (the location of the major record carriers' central operating offices) between telephone subscribers and international record carriers is within the dominion of NYTelCo. As a public utility, surely NYTelCo must do as much for any non-affiliated carriers as it is prepared to do for Long Lines.

7. It is incumbent upon the Commission to inquire into the policies and plans of NYTelCo with respect to interconnection for overseas services. Regulatory agencies must insure that mutual consultation take place between NYTelCo and the international record carriers and that all relevant planning information is made available to these carriers just as it is available to Long Lines.**

*After years of outright refusal, within the past few months, AT&T has offered WUI a limited form of interconnection, for the still restricted service.

**NYTelCo's practices in this regard may affect its recent petition for intrastate rate relief.

8. The Notice, the early responses, previous filings on this subject and a recent Commission decision make it clear that the service in question herein involves data and facsimile transmission at relatively high speeds -- as in datel -- whereas the domestic "dataphone" tariffs encompass teleprinter speed record transmission as well as higher speed data facilities. AT&T and The Western Union Telegraph Company (WUTelCo) recognized a distinction between dataphone and a teleprinter exchange service, based on the speed of transmission, since AT&T was prohibited in the TWX purchase agreement from supplying teleprinters operating at less than 300 bits per second. This provision was inserted specifically to protect the TWX service from competition by dataphone.

9. Clearly, this inquiry does not question whether overseas teleprinter exchange service should be authorized. This service is being adequately provided by the record carriers' international telex service. The Commission itself emphasized this distinction in authorizing ITT World Communications Inc. (ITT) to interconnect its telex network with datatel subscribers of the Hawaiian Telephone Company (HTC). WUTelCo had objected on the grounds that this question properly belonged on the instant inquiry. The Commission ruled:

> "We do not see how the dataphone inquiry has any bearing on this matter, which involves the transmission of telex calls for which ITT provides 50 baud channels on the overseas portion which cannot conceivably be used for voice at the present state of the art."*

*ITT World Communications, Inc., 37 F.C.C. 2d 541, 542 (1972).

10. WUI's extensive advocacy of an international data/voice message service has included the following:

¶ As far back as 1965, WUI recognized the need for an international data and facsimile demand service. In its application, T-C-1896, dated June 15, 1965, WUI sought to institute such service between the U.S. and Europe.*

¶ In its Comments of September 14, 1970, in Docket No. 18875, WUI pointed to the growing requirements for international data and facsimile transmission service as one of the factors requiring the construction of additional overseas communications facilities.

¶ On June 17, 1971, Edward A. Gallagher, President of WUI, stressed the need for a Commission policy to promote the development of international data/voice message services by the international record carriers. (See Transcript of informal conferences before the Commission on Transatlantic Communications, pp. 31-34, 46-49, 69-70, Docket No. 18875).

¶ In its letter of July 29, 1971, commenting upon the Xerox Corporation's letter to the Commission of June 17, 1971, WUI agreed with Xerox that "an urgent public need exists for the international transmission of data and facsimle communications on an interconnected, dial-up basis". WUI renewed its request that it be authorized to provide this service.

*By order of June 22, 1965, the Commission deferred action on that portion of WUI's application (38 F.C.C. 1315). Subsequently, pursuant to an informal request by the Commission staff, WUI asked the Commission to retire its application to the files without prejudice to WUI's seeking authority in the future to render such service.

¶ On July 14, 1972, WUI applied for formal authority under Section 214 of the Communications Act to acquire and operate circuits in the Cantat-2 submarine cable system to provide international data/voice message services to all overseas points. It was WUI's application which precipitated this inquiry.

11. Throughout all of its extensive advocacy on this subject, WUI has urged that, consonant with established governmental principles, a) AT&T must be expressly excluded from providing international data/voice/facsimile on demand service; and b) that full and meaningful interconnection must be guaranteed, with assurance that the international carriers are treated on a parity with the various operating arms of the Bell System.

Attached hereto are WUI's full responses to the specific items in the Notice, to the extent that they apply to WUI.

Respectfully submitted,

WESTERN UNION INTERNATIONAL, INC.

By: Ernest Brod

Howard L. Stevens
Its Attorneys

One WUI Plaza
New York, New York 10004

January 12, 1973

FCC Item A:

> The nature and extent of the current and expected public demand for dataphone or an equivalent service between U.S. and overseas points.

WUI Response:

WUI foresaw the emerging demand for an international data/voice/facsimile service on a dial-up basis as early as 1965. In April 1966, the Intragovernmental Committee on International Communications concurred with WUI's analysis:

> "There are indications that demand will build up in the next ten years for a short-period voice/record service, such as dataphone or datex, to overseas points." (p. 24).

In the chronology outlined above, WUI has continued to inform the Commission of the growing materialization of this demand over the past seven years.

In recent years, the Xerox Corporation and the other international record carriers have confirmed this public demand. In 1971, Xerox informed the Commission of a significant need for international data and facsimile transmission on a demand basis. In their response to Xerox, the international record carriers confirmed the existence of such a public demand. Xerox has expanded its description of the growing market for such services in its comments herein dated September 27, 1972.

Additionally, two associations of potential users of such services -- the American Petroleum Institute and the Computer Business Equipment Manufacturers Association --

have confirmed a need for an international high-speed data demand service.

Numerous recent studies of the future of international communications and projections of data communications growth underscore the extent of future potential demand for these services:

- The high speed transmission of data will generate $5.8 billion of revenue by 1980.*
- AT&T estimates that data communications will account for $2 billion of its revenues by 1980 compared to $450 million for 1970.**
- It has been predicted that some $260 billion will be spent in the U.S. before 1980 to build and expand data processing and telecommunications systems. Capital expenditure for the telecommunications portion will be at least $100 billion.***
- The number of general purpose computers in use is expected to increase from 49,000 in 1970 to 163,000 by 1980. Whereas 185,000 remote data terminals were in use in 1970, the current total is 545,000 and over 4 million are expected to be in use by 1980. The carriage of data is expected to increase from $380 million in 1968 to 1.8 billion by 1975.****
- As of 1971, there were approximately 200,000 domestic telephone units conditioned for data transmission.*****

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* Wall Street Journal, July 22, 1971

** Communications News, November 1970, p. 29

*** Conference on Computer Communications, Washington, D. C., October 24-26, 1972, p. 440

**** Communications News, December 1972, p. 33

***** Specialized Common Carrier Services, 29 F.C.C. 2d 885, n. 26 (1971)

¶ It is estimated data terminals will increase from some 600,000 in 1970 to about 8 million by 1985.*

¶ There are 52,000 facsimile terminals in use today and 200,000 terminals are projected for 1980.**

¶ In the year ended October 31, 1972 the number of terminals sending and receiving data in the British Post Office's datel services grew by more than 25 percent. Data terminals in service reached a new peak of 22,214.***

¶ According to Stanford Research Institute, the rate of increase in the number of computers in the past decade has exceeded 50 percent per year. The number of data sets that will be connected to the switched and leased networks of the Bell System will grow at an annual rate of approximately 30 percent in the case of high-speed data sets and of approximately 70 percent in the case of low-speed data sets. Between 1970 and 1975, the number of computers is projected to grow at 33 percent per year.****

¶ It has been predicted that by 1980, domestic computer data transmission "transactions" will be 15 to 20 times present volume "and about 2.5 million remote terminals will be installed in user business locations. Communications usage will expand from a limited number of specialized applications into virtually every sphere of business activity... In addition, smaller entities will become users..." *****

¶ Domestically, plans are being effected to link 96 American cities in a voice/data network which will permit simultaneous voice and digital data communications by multiple utilization of radio frequency banks.******

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* Institute for the Future, The Future of the Telephone Industry, p. 48 (1971)

** Communications Report, December 1972, p. 32

*** Telecommunications Reports, Dec. 26, 1972, p. 58

**** Patterns of Technology in Data Processing and Data Communications, prepared for F.C.C., Docket 16979, p. 11

***** Specialized Common Carrier Case, Supra, at 953-954

****** Statement in support of Application, American Telephone and Telegraph Company Application [to establish] Digital Channel Groups, October 30, 1972, pp 4-5

¶ AT&T has pointed to the "mushrooming growth of data communications, increasing 50 percent a year for the past five years, and the outlook for continuing growth".*

With particular reference to the international data market, the following is of interest:

¶ International leased line data circuits will grow at an annual rate of 25 percent for the years 1972 through 1976 and 21 percent for the years 1976 through 1980.**

¶ The Federal Republic of Germany reports that "data services are developing very rapidly in Europe" and that "Europe is working intensively and systematically on the development of new data networks and services together with other interested countries".***

¶ Dramatic growth in data terminals is forecast for Europe and Japan:****

Country	1970/71	1975	1980
Belgium	400	5,000	50,000
Denmark	700	16,000	56,000
France	4,000	50,000	------
Germany	4,300	8,000	68,000
Italy	2,200	13,000	------
Japan	27,000	120,000	------
Netherlands	600	------	------
Norway	300	8,000	------
Sweden	1,100	20-30,000	------
Switzerland	500	5,000	10,000
United Kingdom	12,000	57,000	234,000

---

* Telecommunications Reports, Dec. 26, 1972, p.58

** Data Transmission System Study Comsat Contract CSC-IS-369, May 1972

*** Ohlmer, Summary of Existing Data Communications Services in Western Europe, Conference on Computer Communications, Washington, D. C., October 24-26, 1972, p. 265

**** Kimbel, Planning of Data Communications Networks, Conference on Computer Communications, Supra, P. 256

It is clear from all of the above that we are in the early stages of a data communications explosion of substantial magnitude. Recent actions in the domestic field by AT&T, WUTelCo and numerous specialized common carriers bear witness to this phenomenon. Since international telephone volume has been growing at a substantially higher rate than domestic telephone *, and since international record volumes have been growing faster than domestic volumes**, it is clear that the demand for international message unit data/voice will be very substantial.

In addition to the 200,000 dataphone terminals in the U.S., there are estimated to be 30 to 35 thousand such terminals in Europe. Additionally, facsimile terminals which can be accoustically coupled to the public telephone network are being sold in ever increasing numbers both in the U.S. and abroad.

At this stage, it is impossible to quantify the exact nature of this demand because: international short period data/voice does not yet exist as an authorized service; the competitive structure of this international market has not been determined; the rate for this service has not been designed; and definitive arrangements with all overseas correspondents have not been finalized.

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* Domestic toll calls per person are increasing at 10 percent per year, overseas calls are increasing at 25 percent, Pierce, "Communications; Scientific American, 31-41, September 1972.

** Federal Communications Commission, Statistics of Communications Common Carriers, pp. 26, 37-39, 175-182 (1972)

FCC Item B:

> The nature and extent of current public usage of dataphone service between the contiguous 48 states and overseas points with which the service is now authorized.

WUI Response:

At present, the only authorized off-shore data/voice message unit service is between the mainland and Hawaii. The Commission has authorized the international record carriers to provide their datel services to Hawaii with unrestricted alternate voice capability.*

To WUI's knowledge, the usage of this service has been minimal. There are several reasons for this. For one thing, AT&T's refusal to interconnect their domestic public telephone network with the international carriers' overseas facilities has sharply limited the attractiveness of this service.

In recent years, the shortage of cable facilities between the mainland and Hawaii has also retarded the growth of this service. Under all of these circumstances and given the massive uncertainties with respect to a future total international service, the international record carriers have not been free to market this service in their normal manner. The absence of a significant demand for this very

*ITT World Communications Inc., 2 F.C.C. 2d 573.

limited arrangement, under all the circumstance, cannot be considered as bearing in any way upon the true public demand for a full-fledged and unrestricted international datel service.

FCC Item C:

> The technical and operational feasibility of data/voice demand service via satellite, including the availability and cost of error detection and correction equipment.

WUI Response:

The operating characteristics of cable and satellite channels differ in one significant respect -- transmission time. In cable systems, one-way transmission time is in the order of 50 milliseconds; whereas satellite systems require 300 milliseconds. This delay causes inefficiencies in the form of interactive duplex transmissions, including voice.

In 1969, AT&T Long Lines President Richard G. Hough explained the problem to the House Committee on Science and Astronautics:

> "With respect to data, the long delay affects the efficiency and transmission when normal error detection and correction techniques are employed. In most error control systems a block of characters is sent to the distant end, checked there for errors, and a signal is then returned to the originating end, telling it either to repeat the last block or to proceed with the next. The usual transmission time of a block of characters over a voice band data channel is two to three seconds. The additional six-tenths second required for the error control process on satellite circuits reduces the overall efficiency of transmission by 20-30 percent.
>
> * * * * * * *
>
> "Even with the best known corrective measures that may be applied to satellite circuits, there will still be some inherent disadvantage

resulting from the long transmission delay as compared with terrestrial circuits."*

Transmission delay via the satellite medium necessarily means increased customer costs, as compared with cable utilization for the same quantum of data, because of longer circuit chargeable time and computer/terminal occupation time.

Data terminals designed to use a block repetition scheme for error correction generally operate with a fixed block length. This block length is normally set by the manufacturer based on the error rate and transmission time inherent in terrestrial communications systems. Generally, data terminals and computer systems have not been designed to operate optimally with satellites.

Data terminal manufacturers have not been successful in developing new systems which will operate at equivalentefficiency in both satellite and cable modes. Similarly, modification devices designed for use with earlier generation data terminals cannot provide equivalent efficiency.

*Hearings before the Subcommittee on Space Science and Applications, 91st Cong., 1st Sess. pp. 191-192. Mr. Hough was then a Vice President of Long Lines.

Furthermore, with the advent of a domestic satellite system, a "double hop" transmission (encountered in connecting a domestic satellite circuit to an international satellite circuit) would create an additional round trip delay which would further impair service efficiency.

The more commonly used data terminal is equipped with fixed physical memory and logic circuitry optimized for terrestrial transmissions. For example, one of the most common magnetic tape terminals in use will transmit 48 to 57 records (blocks) per minute via cables as opposed to a transmission rate of 28 to 30 records per minute via satellite. Additionally, there are paper tape terminals in use on the datel service whose block storage capacity at the transmitter will not permit satellite operation at all.

Even though some equipment manufacturers offer optional switching arrangements permitting transmission via satellite or cable, efficiencies are not attained because the customer cannot be sure whether he is dialing up a satellite or a cable circuit.

The overseas administrations are currently working to define modem standards which would permit operation at 2400 bps over the international telephone message network. Unfortunately, the problem of satellite routing compounds itself at higher bit rates. A 23 percent increase in billable holding time results from a satellite routing, versus a cable routing.

Some equipment manufacturers have attempted to solve the problem of satellite delay by developing systems which do not require reverse path acknowledgment. Such systems, however, are dependent upon the insertion of redundant information into the forward direction of transmission. Typically, such schemes use 4/3 coding which utilizes the channel only 75 percent of the time for data transmission and 25 percent for the transmission of redundant error correcting "overhead" bits. Thus a built-in penalty inheres respecting the use of equipment designed for satellites.

Accordingly, providing a data/voice message unit service via satellite imposes substantial operation difficulties and cost penalties which do not arise from the use of cable circuits.

Because of the foregoing problems, WUI recommends dedicated bundles of uniformly conditioned cable circuits in order to provide the public with the most efficient and economical datel service. WUI and the British Post Office resolved, at the Transatlantic Cable Conference held at Eastbourne, England on November 18-23, 1971, to reserve at least a group of circuits in Cantat-2 for international data/voice dial-up services.

FCC Item D:

> Whether the restrictions set forth in the facility authorizations issued to AT&T and in the message toll telephone tariffs of AT&T implementing such authorizations should be removed to permit use of the public switched telephone network for the overseas transmission of data and facsimile alternately with voice communications.

WUI Response:

AT&T must not be authorized to provide international data/voice/facsimile demand service. In order to insure a truly competitive environment these services must be reserved to the international record carriers, free of engulfment by the giant Bell System.

Such a decision will accord with numerous Commission rulings and with other governmental recommendations and will be consistent with AT&T's stated disinterest in the international record field and past apathy toward international data/voice message services.

Pursuant to the Commission's TAT-4 decision, American Telephone and Telegraph Co. et al., 37 F.C.C. 1151 (1964), WUI and the other international record carriers were authorized to provide dedicated private line service for alternate and simultaneous voice/record use and AT&T was excluded from these services.

The Commission's policy against entry of AT&T into international alternate voice/record service was founded upon the economic reality that such entry "would seriously jeopardize the ability of the record carriers to obtain a meaningful

share of the business". 37 F.C.C. at 1159. The Commission noted that:

> "The use by customers of leased circuits for alternate voice/record use is, with the exception of the defense agencies, a new service. It is in its infancy, and we do not feel that we should jeopardize the opportunity of the record carriers to provide such services by also allowing AT&T, with its huge resources, as compared with those of the record carriers, to compete with such carriers in providing the service". 37 F.C.C. at 1158-59.

The Commission emphasized that the unfair pressures the international record carriers would face from AT&T participation in the alternate voice/record service would be inequitable and strongly contrary to the public interest:

> "The provision of overseas telegraph service is, however, for the most part, 100 percent of the business of the international record carriers, and a significant loss in their participation in the telegraph business...is a risk the record carriers should not be called upon to take... It is in the public interest that we [protect] the record carriers...from the losses they would inevitably suffer were AT&T permitted to provide this voice/record service. These losses could affect their ability to continue to provide the still important oversea message telegraph service at anything approximating current rates. We note that when we permitted AT&T and the record carriers to compete for the business of the defense agencies for leased circuits for alternate and simultaneous voice/record use, AT&T received all the leases despite the fact that it was then authorized to provide circuits to the international record carriers for their use in competing with it for this business." 37 F.C.C. at 1159.

On the other hand, the Commission noted that, since overseas revenues were less than one percent of AT&T's overall revenues and that overseas data services were but a fraction of that one percent, the effect upon AT&T of exclusion from this field would be of no consequence:

> "Loss of the revenue derived from these record services would have an inconsequential impact on the overall revenue picture of the Bell System". 37 F.C.C. at 1159

The TAT-4 decision has recently been cited by the Commission with approval in its Domestic Satellite decision of December 22, 1972,* and in the Matter of RCA Global Communications, Inc., F.C.C. 72-998, para. 16 (Nov. 8, 1972).

Other governmental authorities have agreed with the Commission that AT&T must be excluded from the international voice/record field. In April 1966, approximately two years after the TAT-4 decision, the Intragovernmental Committee on International Telecommunications, consisting of representatives of the Federal Communications Commission, the Justice Department, the State Department, the Defense Department and the Office of Telecommunications Management considered the question of competition between AT&T and the record carriers, not only with respect to leased channels, but also for the overseas data/voice dial-up service WUI is now proposing to institute. The Committee's Report stated:

> "Although the record industry as a whole is presently operating profitably, it is uncertain if it can continue to do so unless restrictions on competition from AT&T are maintained...
>
> * * * * * * *
>
> "There are indications that demand will build up in the next ten years for a short-period voice/record service, such as dataphone or datex, to overseas points. In view of the considerable number of dataphone instruments

* Memorandum Opinion and Order, Docket No. 16495, par. 28.

> "that are now in use by AT&T subscribers domestically, a general overseas service of this type by AT&T could adversely affect the demand for similar services of the record carriers, as well as for their telex and possibly their message telegraph services." (pp. 24-25).
>
> The Committee concluded that:
>
> "Under the present structure, it appears... that continued viability of the record carriers requires that AT&T continue to be denied the opportunity to compete in overseas voice/data services." (p. 28).

Similarly, the Commission dealt extensively with the dangers of AT&T domination in its June Domestic Satellite order. The Commission carefully conditioned AT&T's participation to ensure that "opportunity for effective entry is not defeated or weakened by AT&T" as a result of "AT&T's existing economic strength and dominance". Otherwise, the Commission explained, AT&T's participation "might well result in discouraging or deterring others from attempting to penetrate the markets for specialized services. As a further consequence, AT&T's dominance in the communications field would be extended..."* The recent reconsideration decision altered some of the restrictions upon AT&T but reaffirmed the appropriateness of substantial service limitations upon AT&T.**

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* Second Report and Order, Docket No. 16495, June 16, 1972, paras. 9-12

** Memorandum Report and Order, Docket No. 16495, Dec. 22, 1972, para. 28.

The Commission, with the concurrence of the Justice Department, in the relatively new CATV industry stated as follows:

> "We are of the opinion that the preservation of...competition will best be assured by the exclusion of telephone companies in their service areas from engaging in the sale of CATV service to the viewing public, except where no practical alternative exists to make such service available within a particular community." Section 214 Certificates, 21 F. C.C. 2d 307, 325 (1970).

In the above cited CATV case, the Commission, pointing to the potential anti-competitive dangers flowing from facility monopolies, ruled that in order to create a competitive climate, severe restrictions upon telephone company participation in CATV was necessary. The Department of Justice had noted that such "affirmative action by the Commission" was required by the "significant competitive risks involved in extensive telephone company ownership and/or operation of CATV systems".* The Department of Justice made the same request in the CATV proceeding that WUI is urging herein: that the Commission bar the telephone companies from this new service and require them to furnish non-discriminatory access to their facilities.**

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* Comments of the United States Department of Justice Docket No. 18509, p.5 (July 11, 1969).

** The Commission required that the telephone companies offer attachment or conduit rights "on a non-discriminatory basis where space for such facilities can reasonably be made available without impediment to the telephone company's obligation to supply non-CATV communications services to the public". 21 F.C.C. 2d at 327.

Commission action against AT&T dominance has been taken in numerous other instances, as in Allocation of Frequencies, 12 F.C.C. 2d 841 (1968) (ordering AT&T to refrain from discriminating in services, charges and provision of interconnection facilities to land mobile radio carriers). In Carterfone, 13 F.C.C. 2d 420 (1968), the Commission sharply curtailed AT&T's historical control of interconnection devices through tariff restrictions. The Microwave Communications, Inc. decision, 18 F.C.C. 2d 1953 (1969) opened the domestic data field, over AT&T's strong objections, to specialized common carriers.

The international record carriers can effectively promote the new overseas data/voice/facsimile message market only if the threat of AT&T's entrance and subsequent domination of this market is foreclosed. Exclusion of AT&T from international data/voice/facsimile will undoubtedly insure effective competition in providing these services, in view of the intensely competitive pattern of the international telegraph industry, with proven excellence in service at the lowest reasonable charges.

Thus, in appropriate circumstances, the Commission has often found it necessary to prevent AT&T domination of various aspects of the communications industry. The extension of AT&T into new fields has been recognized by the Commission

as fraught with the dangers of virtual AT&T monopoly control arising from its domination of transmission facilities and its huge allied domestic network.*

Barring AT&T from providing international data/voice/facsimile demand service will work no hardship upon it. The necessities of domestic interconnection will insure that AT&T participates in revenues arising from the implementation and growth of international data/voice services provided by the international record carriers.** AT&T should devote its resources to its domestic public message telephone service which has had fluctuations in service quality and escalations in rates.

Manifestly, the Commission has declared that "AT&T has stated several times in the past that it has no interest in entering the oversea telegraph field". 37 F.C.C. at 1159. The Commission also keynoted that it has "the unequivocal assurance of AT&T that it has no intention to enter into and, in fact, has a desire to stay out of the international record field".***

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* International facilities control by AT&T is enhanced by the fact that its voice/grade services often require more bandwidth than the record-oriented services provided by the international record carriers. This unhealthy disparity in facility control would be extended if AT&T is permitted to dominate the future international data/voice market.

** Similarly, in the TAT-4 decision, the Commission pointed out that "in any event, AT&T will be playing a part in providing, and deriving revenues from, this new service". 37 F.C.C. at 1160.

*** American Telephone and Telegraph Co., 38 F.C.C. 1222, 1224 (1965).

AT&T's long apathy toward international data/voice dial-up service is apparent. In 1965 WUI made formal requests for the interconnection of its international facilities with the domestic telephone network for purposes of improved international datel service. By letter of January 6, 1966,* AT&T refused because it was "not persuaded" that such interconnection was "required by the public interest at this time". More than five years later, AT&T stated that international dataphone is still "something in the future".**

The public interest requires that international voice/data services be made available to the public by the international record carriers and that AT&T be confined to its existing huge domain. Any other course of entry would merely be a prelude to a monopoly market. A dual grant to the international record carriers and to AT&T would preclude effective competition. (37 F.C.C. 1158, 1159). WUI is willing to compete keenly with the other authorized record carriers for the international datel business. This is fair competition. However, it would be unfair to unleash the Bell System goliath into this newly emerging market.

Granting AT&T international voice/data authority -- even in concert with the international record carriers -- would mean granting AT&T a monopoly in this area. The public benefits

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* Letter from Mr. Harold M. Botkin to Mr. P. R. Esterlin

** Transcript, Informal Conference on Transatlantic Communications, p. 48, Docket No. 18875 (June 17, 1971).

derived from competition and the international expertise of the record carriers would be lost.

FCC Item E:

> Whether the international carriers should be authorized to provide international short-period data/voice.

WUI Response:

International data/voice dial-up service is already being performed by the record carriers in their datel service, with the condition that the voice is limited to coordination of the data. It requires only a minor tariff change -- removal of the limitation on voice -- to transform international datel service into international data/voice message service.

The proposed new service is also merely a short-period version of alternate voice-data leased channel service. Moreover, the international record carriers already offer a form of international facsimile service and a "hot-line" service which have many of the attributes of the proposed service.

Authority for this service can and should be granted to the international carriers in the public interest simply by modification of the Commission's comprehensive Order and Authorization of April 8, 1964, which permits them to provide the following:

> "telegraph message service; telex service; leased telegraph channel service; facsimile (including photo) and data and program transmission services, including voice for cue and

> contact control; any other record service; leased circuits for alternate voice-record use; and leased circuits for alternate and simultaneous voice and non-voice use by defense agencies of the United States Government."

The restrictive words "for cue and contact control" should be deleted, thus authorizing unrestricted voice communications combined with data and facsimile transmissions.

The international record carriers are ideally equipped to furnish this important new service in a truly fair competitive environment. The record carriers will be able to utilize their long-standing experience in providing world-wide service, their far-flung sales forces and their intimate contacts with overseas telecommunications entities, to the ultimate benefit of the using public.

FCC Item E(i):

> The nature of interconnection and operating arrangements between each international record carrier and domestic carriers, including billing practices, division of tolls, etc.

FCC Item E(ii):

> The effect of such arrangements and agreements on speed, efficiency, quality, and cost of service which may be anticipated, in case of both customer and operator dialed calls.

WUI Response:

The nature of the interconnection between the international record carriers and the appropriate arm of the Bell System must be consistent with eventual full automation of the service. Such interconnection must take into consideration the technical and operational plans of the record carriers and accord with the needs of these carriers' subscribers to the same degree that the plans and needs of affiliated Bell System companies are considered. A direct interconnection on a subscriber basis is only sufficient to initiate the basic service. Continuing and ongoing development of the interconnection arrangement is mandatory in order to bring the interconnection arrangement to the point of full automation, thereby:

a) Permitting a reduction in record carrier operating costs;

b) Permitting a reduction in subscriber operating costs by reducing call set-up time;

c) Providing service to users that do not require end-to-end voice coordination, such as time sharing applications where "conversation" takes place between central computer and remote terminal;

d) Permitting customer automation, such as the automatic origination of calls into the telephone system for message switching systems applications.

In effect, the continuing development of the nature of interconnection must parallel the development of subscriber exchanges in the U.S. to increase subscriber dialing capabilities.

With respect to billing practices and division of tolls, precedents exist in the current interconnection of domestic and international telephone services. These precedents are embodied in current agreements between the AT&T Long Lines Department and the associated Bell operating companies. Under established regulatory principles, the public interest requires that AT&T interconnect and operate with the international record carriers on no less favorable terms than the existing arrangements among the participating telephone companies. WUI intends to develop and reiterate the sound regulatory concept that the AT&T Long Lines Department can accord no preferences to associated Bell operating companies over non-Bell operating companies such as the international record carriers and that local arms of Bell may not

favor Long Lines over non-affiliated companies. AT&T's vast monopoly must be operated as a public trust.

Automation of the inbound service is somewhat less difficult since it does not rely on AT&T progress in conditioning U.S. end offices, as described above. The international record carriers will require assignment of U.S. area code status. This initial arrangement could lead to early automation of the inbound service.

Continuing coordination with AT&T, the State Department and the International Telegraph Union is also required to reorder the integrated country code status of the United States. Such reordering, for example, could assign country status to the international carriers, or, alternatively, assign separate status to distinguish pure voice calls from data/voice calls.

A fully cooperative effort involving international carriers, the U.S. domestic carriers, and overseas administrations will insure the most efficient and attractive form of service for users around the globe.

FCC Item E(iii):

Proposed arrangements, operating and financial, with overseas correspondents.

WUI Response:

WUI has begun to discuss with its overseas correspondents the various arrangements which would attend the introduction of a dial-up data/voice service. In some cases it is contemplated that, in principle, the existing arrangements for datel will be applied. It is recognized, however, that on a longer term basis the operating arrangements may have to be altered to promote and accommodate a fully automated service.

Other administrations are reluctant to discuss this area in detail until they can carry out studies of their own and/or obtain more detailed information through CCITT or CEPT.

It is clear that resolution in the U. S. of the policy questions posed on this inquiry will facilitate the discussions with overseas entities. As with all developments of this kind, full cooperation with our partners overseas will be necessary to make this a fully successful venture. Toward this end, WUI is promoting and offering to host international seminars on overseas switched data/voice message services.

FCC Item E (iv)(v)(vi)

The costs, charges and revenues related to the proposed service.

WUI Response

Many of the uncertainties described in earlier sections bear directly upon the costs, charges and revenues to be associated with this service.

The investment and certain operating expenses, for example, depend upon the volume, which is not yet quantifiable. The costs to be incurred in furnishing the service depend upon the method of operation, which is in turn a function of both volume and the specific form of interconnection.

The interconnection charges, which are not yet known, will play a significant role in determining WUI's costs of operation and resultant charges to the public.

WUI's revenue will be further impacted by the Commission's ruling with respect to AT&T's participation and by final arrangements with overseas correspondents.

These various matters are currently under review by WUI.

FCC Item F:

> The relative efficiencies of record carriers, on the one hand, and, voice carriers on the other, in furnishing such services.

WUI Response:

As indicated in earlier sections, the public interest requires that the record carriers be authorized to provide international data/voice demand service and that AT&T be excluded. Unless this approach is adopted, the public will be deprived of meaningful competition. AT&T's participation would inevitably monopolize the service just as would have been the case in the alternate voice-record leased channel field in the absence of the Commission's wise TAT-4 decision.

Under a monopoly approach, there would be little incentive for AT&T to institute efficiencies and service advancements. On the other hand, by reserving this service to the international record carriers, the Commission will insure a climate of intensive competition such as has been so successful in the past.

The international telex service provides a useful example of the massive benefits flowing from the impetus of vigorous competition among the international record carriers. Spurred by WUI's introduction of the first fully computerized telex system in 1966, the other two major record carriers have computerized their telex systems. WUI currently offers end-to-end (gateway and hinterland) fully automatic telex

service from the U.S. to more than 80 countries. By way of comparison, AT&T is in the earliest stages of fully automatic telephone service. Direct outbound dialing exists on a sharply limited basis involving only a handful of U.S. cities and a few countries in Europe.

While AT&T is just beginning to reduce operator handling, the international carriers have already gone several steps beyond automation of the international telex service. They now offer such sophisticated refinements as abbreviated dialing, automatic retry for the "busy" condition, store and forward service and departmentalized billing.

The international carriers' automation of international telex has included interconnection with the TWX system, despite problems of both speed and code conversions.

As a result of the competition within the international record carrier industry, today's international telex user has available an ultra-modern system, replete with innovative service enhancements. Under a properly structured format, similar benefits will await the international datel users. However, under the monopoly approach which would inevitably follow AT&T's participation this market, such benefits will be deferred or lost. As the

Office of Telecommunication's Policy has noted, "Without competitive pressure, there is no incentive for the utility to be more responsive or to offer a wider variety of service qualities".*

In addition to the above illustration of the service benefits of competition, the full-service international record carriers have compiled decades of experience in the end-to-end furnishing of alternate voice/record services on a worldwide basis. Their marketing, engineering and operational expertise make them uniquely qualified to serve the international datel market.

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* Specialized carriers: A Conceptual Approach To Rates And Entry, Office of Telecommunication's Policy, PB 211652, June 1972, p.8. In a similar vein, it has been pointed out that:

> "Bell has had something of a history of announcing new services with great fanfare, and then delivering them belatedly, or in greatly reduced quality. Picturephone was to have been the great achievement of the 'forties; data transmission, the breakthrough of the 'fifties; electronic switching, the miracle of the 'sixties; and now data networking is the watchword for the 'seventies. That delivery of these services is running a little behind schedule says less about inadequacies at Bell Labs or Western Electric than it does about the lack of the competitive urgency, until recently, needed to stimulate prompt and sustained action toward the implementation of these noble goals." Cox, The Promise and Peril of Competition in Intercity Communications, Conference on Computer Communications, Washington, D. C., October 24-26, 1972, p. 440.

FCC Item G:

> An estimate of the number of circuits, in addition to those authorized each carrier for existing services, that will be required for the required services.

WUI Response:

As demonstrated in WUI's response to Item A, there are significant indications of considerable demand for international data/voice/facsimile dial-up services. However, such demand is not susceptible to meaningful quantification in terms of circuit numbers at the present time.

As the Commission is aware, large quantities of both cable and satellite facilities will become available during the balance of the decade of the seventies. However, because of the transmission delay problem inherent in the usage of satellites an inquiry into data facility needs must at the present time be limited to the cable medium. High capacity and economical cable systems are in the developmental and construction stages both in the Atlantic (Cantat-2 and TAT-6) and Pacific (Main-3 and associated cable extensions) basin areas. Cable facilities are particularly well adapted for the transmission of rapidly emerging high speed data and facsimile communications requirements.

WUI has urged the Commission to insure that adequate cable circuitry is made available for the effective handling of developing international data/voice demand services, particularly during the 1974 - 1976 time frame in the Atlantic basin area.

The provision of these services will stimulate the fill of new high capacity facilities in furtherance of the Commission's stated objective -- as set forth in its Memorandum Opinion and Authorization, released July 12, 1972 authorizing carrier participation in the TAT-6 and Cantat-2 cable system:

> "...maximizing use of the services offered so that the very high capacity facilities being made available, should, to the greatest extent possible, draw additional customers and traffic."

FCC Item H:

> The effect on the revenues and service requirements of each respondent carrier, should one or more carriers in addition to said respondent be authorized to provide overseas data/voice demand service.

WUI Response

While it is clear that the emerging demand for a data/voice facsimile dial-up service will be substantial, it is not yet possible to determine what proportion of this demand will represent new business and what proportion will represent diversion from existing services.

There are three choices available to the Commission with respect to authorizations to provide this service: a grant to AT&T alone; a grant to AT&T and the international record carriers; a grant to the international record carriers alone. Under either of the first two choices, the Commission will be granting AT&T a monopoly of this service and depriving the record carriers of their opportunity to offer a datel service which is fully responsive to the needs of the communications public.

Only a ruling which reserves this service to the record carriers and bars AT&T will permit meaningful participation by the record carriers and will insure that the public receives the benefits of meaningful competition. At the same time, the mammoth AT&T will suffer absolutely no harm as a result of its exclusion from a service in which it has shown no interest over the years.

WUI has elaborated above upon the advantages flowing from the vigorous competition which is traditional among the international record carriers and upon the dangers of an AT&T monopoly.

FCC Item I:

> How the public interest, convenience and necessity will be served by authorizing one or more international carriers to provide overseas data/voice demand services.

WUI Response:

The large and growing capabilities of United States and overseas users of data/voice services underline the need for international linkage. This gap can be filled by a simple change in the international record carriers' datel service, removing the restriction on alternate voice utilization. Such an authorization to the record carriers will not only satisfy the burgeoning need for a data/voice demand service but will also further stimulate this service.

As argued at length above, (Responses to FCC Items D and E) the international record carriers possess the experience, capability and initiative to provide this service. WUI, for example, has championed this service for more than seven years.

The public interest will not be served by a grant of authority for short-term data/voice service to AT&T. Entry of AT&T would effectively foreclose the record carriers from participating in the new market, thus depriving the public of the benefits of vigorous competition.

Historically, consumer economies and technical innovation have resulted from competition among the record carriers.

WUI urges the Commission to remove the restriction upon the international record carriers' datel service; to bar AT&T from international data/voice/facsimile dial-up service; and to insure that the Bell System provides meaningful interconnection and in all respects deals with the record carriers on an equal basis with affiliated telephone companies.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C.

Inquiry into policy to be followed in future authorization of overseas dataphone service	))))	Docket No. 19558

REPLY COMMENTS
OF
COMMUNICATIONS SATELLITE CORPORATION

Communications Satellite Corporation (Comsat) hereby submits its reply comments as part of its response to the Commission's Notice of Inquiry in the above-captioned matter released on July 31, 1972:

1. As Comsat stated in its Comments filed in the proceeding on November 29, 1972, Comsat believes that the national objective of improved international commerce will be served by permitting both voice and record carriers to provide overseas dataphone service, provided that American Telephone & Telegraph Company is required to provide interconnect as necessary for the record carriers. As AT&T pointed out in its Comments filed on January 11, 1973,

the international public message switch service has resulted in a standardization of switching equipment--a net gain for the people of the world enabling them to communicate directly with any party in any country. Similarly, Comsat believes that using data through this system will result in a standardization of data devices. There will be a force working toward a commonality of terminal equipment, which can only redound to all users of international telecommunications service.

2. Comsat believes that the fears of market domination by AT&T expressed by the record carriers in their comments are unfounded. Opening up the international public switched system to the part time users must eventually result in more business for all segments of the telecommunication industry. As various agencies and corporations enlarge their exchange of data and facsimile, their per-minute cost on the public message switch lines will eventually exceed the cost for a full time leased circuit. Thus, the record carriers will undoubtedly, in the long run, serve a new leased service market.

3. With respect to the issue of the technical and operational feasibility of providing dataphone service via satellite, Comsat noted in its Comments of November 29, 1972 that an amendment to CCITT Recommendation V41 was expected to be adopted by the CCITT in the fall of 1972. This amendment has now been formally adopted by the CCITT, and Recommendation V41 now describes an error control system suitable for operation at data rates up to 4800 bps over satellite circuits. This system will provide a transfer efficiency of greater than 92 percent for bit error rates of up to 10^{-5}.

4. In the Comments filed by ITT World Communications Inc. on January 12, 1973 (pp. 15 and 30), ITT stated that satellite circuits are undesirable due to "impulse noise and presently uncontrollable transmission outages." However, ITT did not provide test data to support this statement. Tests run by Comsat at a number of its earth stations result in data similar to that obtained by others, namely, that in overall systems involving

long haul terrestrial circuits the predominate source of impulse noise will be the latter. For example, in a series of tests run between Washington, D. C. and a communications site in Hawaii, the Air Force found that while the terrestrial connection between the Washington and California earth station had several dozen impulse noise counts per 15-minute period, the corresponding noise count from earth-station to earth-station via the satellite was only 1 to 2 counts for tests* over similar periods. Considering the basic performance of satellite channels and the availability and continuing development of more compatible error detection equipment, satellite channels are highly suitable for the provision of dataphone type service.

Respectfully submitted,

COMMUNICATIONS SATELLITE CORPORATION

By /s/

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Denis J. Brion
Its Attorney

February 14, 1973

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* Northrup & Carter, "Land Sky Circuit Tests," Telecommunications, April 1972.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas dataphone service.	))))	Docket No. 19558

REPLY COMMENTS

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67 Broad Street
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Attorneys for
ITT World Communications Inc.

Dated: March 23, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry into policy to be followed in future authorization of overseas dataphone service.	)	Docket No. 19558
	)	
	)	

REPLY COMMENTS

ITT World Communications Inc. (ITT Worldcom) hereby offers the following Reply Comments in response to the Commission's Notice of Inquiry (Notice), released July 31, 1972 (FCC 72-673), as modified by its Order released March 14, 1973 (FCC No. 98961).

The paramount issue in this proceeding is posed by Question (d) of the Notice which reads, in part, as follows:

> "Whether the restrictions set forth in the facility authorizations issued to AT&T and in the message toll telephone tariffs of AT&T implementing such authorizations should be removed to permit use of the public switched telephone network for the overseas transmission of data and facsimile alternately with voice communications;..."

ITT Worldcom believes that it is not overstating the importance of this issue to say that the future of the international record industry will be shaped by the Commission's answer to this question. For that reason ITT Worldcom's Reply Comments will be addressed primarily to this point.

In its initial comments ITT Worldcom contended that American Telephone and Telegraph Company (AT&T) should not be permitted to furnish international dataphone service because:

(1) AT&T has repeatedly assured the Commission of its intention to stay out of the international record field, and the international record carriers have relied on such representations.

(2) AT&T could use its potentially overwhelming competitive advantages to dominate international dataphone service, and to preclude effective competition by the international record carriers. Such competitive advantages would be based on:

(a) AT&T's domination of the domestic switched service network.

(b) AT&T virtual monopoly of existing dataphone service;

(c) AT&T exclusive franchise for handling voice services to and from the U.S. Mainland.

(d) AT&T's huge nationwide sales force; and

(e) AT&T's ability to cross-subsidize its international dataphone operations from its monopoly services.

(3) Domination by AT&T of international dataphone service would seriously impair the continued viability of the international record carriers, since it would result in a massive diversion of revenues from other overseas record services.[1/]

Neither AT&T or any other party filing Comments in this proceeding have rebutted these arguments as to why AT&T should be precluded from rendering this service. Indeed, AT&T's Comments offered no explanation, whatsoever, for the modification of its prior representations to the Commission that it intended to stay out of the international record field.

The Comments filed in this matter were divided on how the Commission should answer the basic question of whether the present restrictions, which now prohibit AT&T from furnishing international dataphone service, should be removed. AT&T, Communications Satellite Corporation (Comsat), Hawaiian Telephone Company (HTC), United States Independent Telephone Association (USITA), Xerox Corporation,[2/] and the Central Committee on Communications Facilities of the American Petrolum Institute (API) all favored such action. The Western Union Telegraph Corporation (WUT), RCA Global Communications, Inc. (RCA), Western Union International, Inc. (WUI), TRT Telecommunications Corp. (TRT), and ITT Worldcom uniformly opposed changing the present

1/ ITT Worldcom Comments, pp. 2-3.

2/ Computer and Business Equipment Manufacturers Association (CEBMA), of which Xerox is a member, filed Comments devoted to the need for international dataphone service, but specifically did not address itself to "questions bearing on carrier selection" CEBMA Comments, p. 3.

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restrictions which prohibit AT&T from furnishing international dataphone service.

Each of the other international record carriers also agreed with ITT Worldcom's contention that removal of these restrictions would permit AT&T to monopolize[3/] the international dataphone market; which, as RCA said, posed "a real and subsisting threat to the very existence of the international voice/record carriers."[4/]

3/ "The public interest requires...that AT&T be confined to its existing huge domain. Any other course of entry would merely be a prelude to a monopoly market." WUI Comments, p. 19.

"...if AT&T were authorized to provide Dataphone service internationally, it would, by virtue of its domestic monopoly of the service, quickly dominate if not monopolize the international field. There would be no effective competition." TRT Comments, p. 3.

"If AT&T were allowed entry, with its vast resources and dominance in both domestic and international communications, it would obtain the great majority of this record business at the expense of the international voice/record carriers." RCA Comments, p. 4.

4/ RCA Comments, p. 4.

ITT Worldcom attached little weight to the Xerox filing, since its only, and purely parochial, interest is in maximizing its sales of equipment. API's comments stressed the need for international dataphone service. However, ITT Worldcom is certain that if the Commission authorizes the international record carriers to furnish international dataphone service in competition with each other, at a cost comparable to that presently charged for overseas voice telephone service, the fact that this service would be furnished by the international record carriers only should be a matter of indifference to API.

USITA's Comments were merely a short form echo of AT&T's plea for lifting of the present restrictions "on the use of the switched telephone network for overseas dataphone - type service."[5/] ITT Worldcom is, however, puzzled by USITA's apparent conclusion that somehow the position of independent telephone company subscribers would be different if the international record carriers were authorized to furnish international dataphone service on an exclusive basis. The subscriber would still make or receive calls on the domestic MTS network (AT&T and Independent). The only difference would be that, under the plan proposed by ITT Worldcom, only the international record carriers would furnish the overseas portion of the connection.

5/ USITA Comments, p. 2.

The Comments of Comsat (29% owned by AT&T) predictably favor the modification of the existing restrictions which prohibit AT&T from furnishing international dataphone service. However, Comsat devoted only one paragraph to this point in a nine-page pleading. Moreover, Comsat offered no supporting reasons for its conclusion, other than the vague generalization that the Commission should remove "all conditions...which could act as barriers to international commerce."[6/]

Except for the aforesaid paragraph, Comsat's Comments were primarily devoted to attempting to prove that satellite circuits are as suitable for international dataphone service as cable circuits. However, ITT Worldcom notes that even Comsat's part-owner, AT&T, was obliged to concede that "for customers whose data systems use block parity checking, satellite facilities may prove less satisfactory than cable facilities which do not have any significant delay factor."[7/]

In its Reply Comments, filed February 14, 1973, Comsat dismisses the contention made by ITT Worldcom regarding the deficiency of satellite circuits for international dataphone use, due to their "impulse noise and

6/ Comsat Comments, pp. 8-9.

7/ AT&T Comments, p. 15.

presently uncontrollable transmission outages"[8], because "ITT did not provide test data to support this statement."[9] The implication of this statement is that, since ITT Worldcom failed to furnish proof of this statement, it is false.

Comsat is, or should be, well aware that the Cayey, Puerto Rico earth station, which it "manages", has been plagued by repeated outages for various technical reasons. ITT Worldcom has attached hereto, as an Appendix, a listing of the outages, and the duration of such outages, which it understands occured at this earth station over a period of eighteen months, between April , 1971 and October, 1972. ITT Worldcom would like to emphasize that the outages listed in the Appendix are only the outages of which it is aware. ITT Worldcom does not represent that this listing, which is in itself sufficient to prove ITT Worldcom's point, represents a complete summary of the outages at this earth station which occured during the said period. It may well be that additional outages occured during this period, that are known to Comsat, in its capacity as "manager" of the earth station, but are not known to ITT Worldcom.

The principal argument raised by the Comments of AT&T and HTC, as to why the present restrictions which prevent AT&T from providing international

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8/ ITT Worldcom Comments, p. 15.

9/ Comsat Reply Comments, p. 3.

dataphone service should be removed seems, in substance, to be that illegal acoustical interconnection is so rampant the Commission and/or the voice carriers cannot police it; therefore, the Commission should license it. In this connection AT&T stated:

> "...as a practical matter, it would be very difficult to enforce such artifical and undesirable restrictions on the use of the public switched network without the development and installation of costly surveillance and detection equipment. The public interest clearly requires an end to such tariff restrictions." 10/

HTC, after noting that a "significant number of its subscribers have acquired facsimile equipment which may be acoustically coupled to its telephone facilities" 11/, observed:

> "...the appearance of a subscriber dialed message telephone call is the same whether the subscriber speaks Hawaiian, English, Japanese, plays a record, or places his telephone handset in an acoustic cradle for facsimile transmission. The message telephone network performs its transmission and switching function in the same way regardless of what is being transmitted." 12/

ITT Worldcom regards this argument as specious. It is axiomatic that an illegal use may be made of any perfectly legal object or service. A copying

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10/ AT&T Comments, p. 9.

11/ HTC Comments, p. 2.

12/ HTC Comments, pp. 2-3.

machine may be used to make unauthorized copies of a protected work. A rented automobile may be used to transport stolen merchandise. AT&T's, MTS network may be used for the transmission of illegal gambling wagers or gambling information.

The practical answer to the AT&T/HTC argument is that ITT Worldcom's proposal, if implemented, would remove the economic incentive for resorting to illegal or "bootleg" connections. If the international record carriers are authorized to furnish international dataphone service on an exclusive basis, and this service is furnished by them at a cost comparable to AT&T's overseas telephone charges, there would be no incentive for the making of illegal calls. In fact, there would be very good reasons for a customer to use the legal international dataphone service, offered by the international record carriers, rather than an illegal connection to AT&T's overseas telephone network. The legal service would be backed by the responsibility of an authorized carrier for high quality and continuity of service; no such responsibility attaches to any carrier in the case of a "bootleg" connection. A customer using a "bootleg" connection for the overseas transmission of data could hardly complain to AT&T that his transmission was garbled.

Additionally, ITT Worldcom has proposed to use only conditioned circuits for its international dataphone service. The use of such circuits increases a customer's chances of obtaining a satisfactory connection for the transmission of data--particularly at high speeds. Therefore, it would be foolish for a customer to use AT&T's facilities (by means of a "bootleg" connection) since AT&T does

not use conditioned circuits for its MTS network.

ITT Worldcom strongly disagrees with AT&T's argument that having international dataphone service furnished by international record carriers would impose "added inconvenience"[13/] on all overseas data calls. While it is true, that ITT Worldcom's existing Datel service requires the intervention of an operator, the international dataphone service proposed by ITT Worldcom would be fully automatic. It should also be pointed out that, at the present time, the majority of overseas telephone calls via AT&T's present network require the intervention of an overseas operator, since international DDD service is only offered to and from a limited number of locations.

Although, ITT Worldcom's Datel service presently provides access to the switched telephone network in a number of major foreign administrations, many of these foreign administrations, recognizing that the ability of their telephone networks to accept high speed data communication is restricted, limit their responsibilities for data communication at speeds in excess

13/ AT&T Comments, p. 21.

of 600 baud. Some major foreign administrations, such as Italy and Spain, do not at the present time permit the use of their switched telephone network for international data communication. As a matter of fact, there is growing support in the European administrations for the establishment of a separate data network, capable of accomodating high speed data transmissions, and several major studies looking toward the implementation this concept have been undertaken. 14/

For the reasons above stated, ITT Worldcom urges the Commission to maintain its present policy which prohibits the furnishing of record services to non-U.S. overseas areas by voice carriers. This policy has lead to the development of a highly competitive and innovative international record industry -- with resultant benefits to the public. Since no showing has been

14/ The CEPT countries are presently making a joint study of data networks; the French Administration has, separately, commissioned Societe General de Service Informatique to undertake a similar study. Additionally, CCITT Study Group VII (formerly working party NRD) has, for the 1973 - 1976 period, been assigned to study questions relating to "new networks for data transmission".

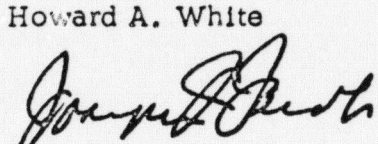
made that the public interest requires a radical change in the structure of this industry, the policy separating voice and record services should not be modified.

Respectfully submitted,

ITT World Communications Inc.

By:

Howard A. White



Joseph J. Jacobs

Its Attorneys
67 Broad Street
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Dated: March 23, 1973

APPENDIX

FAILURES OF PUERTO RICO SATELLITE CHANNELS

DATE	GMT TIME From	To	DURATION	REMARKS
4/2/71	021816	021828	12 mins.	Due to Wave Guide Switch Failure at Cayey.
5/4/71	042010	042011	1 sec. each	Due to High Power Amplifier Failure at Comsat (Cayey).
	050513	050528	15 sec.	
	050514	050518	4 secs.	
5/27/71	272301	272346	45 secs.	Due to Modulator Failure in Cayey.
6/7/71	1655		4 min. 15 secs.	Due to High Power Amplifier failure in Transmitter at Cayey.
6/9/71	1419		16 secs.	Due to Amplifier Switch in Cayey.
6/14/71	150234	150303	29 mins.	Failure in Intermediate Facility Link Amplifiers at Cayey, due to failure of AC Power Breakers.
6/15/71	151253	151256	3 mins.	Comsat Cayey was making adjustments in the Antenna tracking equipment and the antenna went out of tracking.
8/16/71	2007		15 secs.	Due to a Switch that was turned down on the high power amplifier at Comsat/Cayey.
8/22/71	0331		2 mins. 49 secs.	Multiplex Equipment at Comsat/Cayey lost signal from ATT.
10/6/71	061446		48 secs.	Due to GCE Transmitter at Etam
	061531		9 mins 25 secs.	Due to an ATT Microwave problem between Etam and Colesville.

DATE	GMT Time From	To	DURATION	REMARKS
10/7/71	070700		1 min. 20 sec.	Due to Receiver Transfer KB Problem at Comsat/Cayey.
1/2/72	0253		30 secs.	Failure at Receiver Comsat/Cayey
1/28/72 to 2/2/72			3 hrs. 10 mins.	U.K. Satellite Interruptions because of trouble at Goonhilly Earth Station, satellite systems with London were intermittently interrupted.
1/30/72				IS-3 Flight 7 (Andover/Goonhilly) - antenna problems on this flight resulted in shifting all services to IS-3 Flight 6 at 0045G.
2/13/72	132338		30 secs.	Failure due to Transmitter trouble at Etam
3/4/72	040300		2 mins.	Failure at Etam due to antenna trouble.
4/13/72	1436	1438	2 mins.	Failure at Etam due to antenna trouble
	1441	1443	"	" " " "
	1655	1658	3 mins.	" " " "
6/12/72	081936	081940	4 mins.	Due to antenna off track at Cayey
6/28/72	271345	271345	69 secs.	Due to failure of Carrier at Etam
7/1/72	0201	0244	2 mins. 37 sec.	Due to maintenance at Etam replacement of Wave Guide Switch
8/23/72	0919	0922	3 mins.	Failure due to Electric Power Generator at Cayey
10/25/72	0536	0544	8 mins.	Due to power failure at Cayey.

A-305

CERTIFICATE OF SERVICE

I, Patricia A. Faiella, hereby certify that I have this 23rd day of March, 1973, mailed by United States Mail, postage prepaid, a copy of "Reply Comments" to the following:

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Patricia A. Faiella
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)))	Docket No. 19558

REPLY COMMENTS OF
THE WESTERN UNION TELEGRAPH COMPANY

The Western Union Telegraph Company (Western Union) herein replies to the comments submitted in the above-captioned proceeding. The submissions by the commenting parties demonstrates the difficulty in determining the proper course to follow for the development of an international alternate voice/data service. Conflicting viewpoints reflected in the comments can be grouped into three major areas, each of which is represented by a fundamental question which must be resolved. These questions are:

1. Which entity or entities, if any, should be permitted to provide international alternate voice/data service?
2. What will be the effect of such services upon existing service?
3. What is the technical and operational feasibility of providing such services via satellite?

1. Of the three, the most critical is the effect of an international alternate voice/data service upon the existing revenues and services of the record carriers, including Western Union. Regardless of the entity or entities which may be authorized to provide the service, all parties envision a substantial diversion of revenues and traffic from international Telex service. Thus, one of the essential arguments of the international carriers in support of their contention that they alone, to the exclusion of AT&T, should be authorized to provide international alternate voice/data service, is the projected massive diversion of existing Telex revenues to the new service. Because of such massive diversion, the international carriers contend that they will suffer irreparable injury unless they are authorized to provide the service.

2. This argument, we submit, begs the question. A most disturbing estimate of diversion is provided by ITT WorldCom on page 47 of its comments. ITT estimates that, "in 1976, diverted Telex minutes between the United States of America and the foreign destinations...would result in a minimum loss of gross retained Telex revenues of almost $5 million. This is more than eight times the gross retained revenues that ITT WorldCom estimates it will derive from providing international dataphone service during that year." (Emphasis supplied) This is a most disturbing

statement since all of the international carriers indicated that international Telex service has become a principal source of revenues and profits. Thus, regardless of the entity or entities that will provide the new service, all parties expect that international Telex service will be severely impacted. The adverse effects of such a result would manifestly be felt in the domestic Telex and TWX service provided by Western Union.

3. The ultimate effect upon record communications services in general and international record services in particular have not been adequately addressed in the comments submitted. Until the Commission can determine the nature and structure of the international record communications industry after international alternate voice/data services (other than existing Telex and Datel) are introduced, a decision upon authorizing such a service initially should not be made.

4. Only after a thorough study of the above question can a decision be made with regard to the proper entity or entities, if any, which should be permitted to provide the service.

5. Another essential question, i.e. in regard to the feasibility of the provision of such a service by satellite circuits, has produced apparently conflicting opinions. COMSAT stated in its comments that there are no essential problems with regard to satellite transmission of data communications. RCA GlobCom in-

dicates that, while there may be some problems with regard to error rate, such problems can easily be overcome. The other parties that addressed this question, however, indicated that satellite transmission of data provides severe problems and that, as a result, international data services would have to be provided by means of cable facilities. The respective differences in position on this subject reflect the commenting parties assessment of the availability of terminal equipment that would serve to reduce the error rate to acceptable limits. ITT appears to present a most realistic viewpoint with regard to this question, by acknowledging that while in the future more sophisticated error detection and correct equipment will be developed, the error rate problem will nevertheless remain since much of the existing inadequate equipment will still be utilized by subscribers well into the future.

6. The Commission should, in our opinion, assume that virtually all international dataphone traffic will be transmitted via cable facilities rather than via satellite. A determination of the circuit requirements for providing such a service should thus be compared with the existing and proposed transoceanic cable capacity with due regard given to existing estimates for circuit requirements to provide international voice and record traffic for the remainder of this decade. Such estimates have not been presented to the Commission in the context of this proceeding. However, an analysis of future circuit requirements is essential in the Commission's determination of the entity or entities that would be providing the data services.

7. In any event, should the international record carriers be authorized to provide international dataphone service, it appears that they would simply interface with AT&T in transmitting dataphone overseas. As we indicated in our comments, unlike Telex, the international record carriers would be in no position to be a retailer of such services as well as the transmitting carrier. As a result, the international record carriers would be in the anomalous position of interconnecting with AT&T for the transmission of a service which is diverting revenues from Telex service, a service which the international record carriers market vigorously in the United States. If these circumstances should obtain, and there is a sufficient demand for dataphone service with the international record carriers providing the overseas transmission facilities, the Commission should re-evaluate the proper role of the international record carriers as a retailer of communication services in the United States. It may well be that should the international record carriers be authorized to transmit international dataphone, that the international record carriers would be evolving into a "carrier's carrier" and as such they should be restricted from selling any service to the public because of the obvious conflicts and anomalies that would result.

8. In conclusion, the threshold questions essential to the development of a proper policy in this matter have not been adequately answered. A proposal that has the potential to re-

structure the international record industry and adversely impact the domestic record carrier in the porcess, cannot as RCA GlobCom attempts to do, be likened to the Commission's action in the Specialized Common Carrier Inquiry (Special Common Carrier Services 29 FCC 2d 870 (1971)). RCA advances the proposition that where new services are offered, the public will be benefitted by "real competition." However, as indicated by all of the international record carriers, the provision of international data services as proposed herein could supplant significantly the heart of international record communications, i.e. international Telex. The rationale of the Specialized Common Carrier decision was that the Commission would be authorizing a supplement to existing private line communications services. Thus, the essential question is not the intramural one of whether or not AT&T should be barred from providing international dataphone service or conversely, whether AT&T should be the only carrier to provide it. The question not yet addressed is what effect international dataphone service will have on the record communication industry and on the public interest. For these reasons, we urge the Commission to issue a Further Notice in order to develop further information in accordance with the above comments.

Respectfully submitted,

THE WESTERN UNION TELEGRAPH COMPANY

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Of Counsel:

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March 28, 1973

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I hereby certify that I have this 28th day of March, 1973, mailed by United States Mail, postage prepaid, a copy of the foregoing to the following:

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)))	Docket No. 19558

REPLY COMMENTS OF
AMERICAN TELEPHONE AND TELEGRAPH COMPANY

American Telephone and Telegraph Company (AT&T) hereby submits its reply to the Comments filed by the international record carriers[1] in the above entitled proceeding.

1. The main thrust of the Comments of all the international record carriers is that AT&T should not be permitted to furnish any message data service between the United States Mainland and overseas points and that such service should be reserved for the record carriers. In support of their position, they all rely on decisions and pronouncements which are not germane to the specific proposal AT&T has advanced in its Comments in this proceeding.

2. AT&T's proposal with respect to its participation in the overseas message data service is

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1 ITT World Communications Inc., RCA Global Communications, Inc., TRT Telecommunications Corporation, and Western Union International, Inc.

simply that the users of its Long Distance Message Telecommunications Service (MTS) should be permitted to use the MTS network for the transmission of data messages to all overseas points to the extent that the network in its normal MTS configuration is technically capable of meeting their data requirements. Subscribers to MTS have been permitted to use the network for data calls to and from Canada since 1958,[1] Hawaii since 1965 and Alaska since 1966. In recent years, customers, such as Xerox, have persistently urged AT&T to remove the existing tariff limitations on the use of the MTS network for the transmission of data calls to other overseas points. AT&T is convinced that there is a requirement for the transmission of simple data messages to overseas points which the MTS network is specially suited to meet; that these requirements are not the same as the more specialized requirements that the international record carriers propose to meet as indicated in their comments filed in this proceeding; that use of the MTS network is the most efficient and economical way to meet these simple data requirements; that to attempt to impose artificial barriers against such use of the network would be economically wasteful; that there would be no practical way to police such artificial

1 The MTS network has also been available to MTS customers for data calls between points in the continental United States since 1958.

restrictions; that customers not only want, but are insisting upon, the right to use the network for that purpose; and that, therefore, it is clearly in the public interest that customers be allowed to use the network for overseas data transmission.

3. As pointed out in AT&T's Comments, the overseas MTS network, consisting of the public switched telecommunication networks on the United States Mainland and at overseas locations interconnected by their associated overseas channels, is fully capable in its normal state of handling certain data messages as simply and expeditiously as it handles telephone calls. No special facilities, no special conditioning of existing facilities and no special operating forces and procedures are needed to handle such simple data calls over the network. Use of the MTS network for the transmission to overseas points of those data calls for which the network is suited and technically capable of handling will thus not only provide an efficient method of meeting this customer requirement at no additional cost but also make possible improved utilization of the network and greater convenience and benefit to customers.

4. Contrary to the international record carriers' contention, there is no established policy of the Commission that would prevent authorization to

AT&T to permit its MTS network to be used by subscribers for the overseas transmission of data as AT&T and its users have requested. As early as 1959, the Commission noted that its position with respect to the requirement that international voice and record communications be furnished by separate entities had never been a "doctrinaire or absolute one".[1] The Commission stated that "exceptions have always been made when they were found to be in the public interest".[2] As recently as 1966, in authorizing ITT Worldcom to use its facilities between Hawaii and the Mainland alternately for voice use (without limitation to control purposes) in connection with its DATEL Service, the Commission stated that "normally we have not licensed AT&T to provide overseas record services."[3] (underscoring added.) However, the Commission went on to note that it had made exceptions to that "normal" practice in the case of Hawaii in 1955 and that it had "reaffirmed since, and extended that exception in the TAT-4 decision..."[4] Thus the TAT-4 decision, which RCA Globcom and WUI call the "landmark" decision, itself recognizes that exceptions to the "normal" practice of not licensing AT&T to provide overseas record services will be made when the public interest so requires.

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1 American Telephone & Telegraph Co., 27 F.C.C. 113, 120
2 ibid
3 ITT World Communications Inc., 2 F.C.C. 2d 573, 576
4 ibid

5. In the case of AT&T et al., Data-Phone, 38 F.C.C. 1222, the Commission authorized AT&T to provide "DATA-PHONE service" between the Mainland and Hawaii on the basis that Hawaii presented a special situation. The Commission stated in that case[1] and again in a related decision[2] that the extension of overseas data service by AT&T to points other than Hawaii would require further application to the Commission by AT&T which the Commission would evaluate on its merits at that time. Thus the Commission has in effect reserved judgment on the question whether AT&T would be allowed to use its message network for the tranmsission of data to other overseas points. In the TAT-4 decision the Commission considered only whether to authorize AT&T to provide private line (leased) alternate voice/non-voice service. The Commission decided that AT&T should be excluded from providing that service, with exceptions in the case of such service to Hawaii and then existing circuits for the military. The language of the Commission's Memorandum Opinion and Order in that case makes it perfectly clear that the Commission's decision applied only to private line (leased) alternate voice/non-voice channels. The issue raised by AT&T's Comments in this proceeding, i.e., authorization to AT&T to permit its customers to use the MTS service for the transmission of data messages

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1 American Telephone & Telegraph Co., et al., Data-Phone, 38 F.C.C. 1222, 1224

2 American Telephone & Telegraph Co., et al., Data-Phone, 1 F.C.C. 2d 374, 375

to all overseas points, is thus in effect a matter of first impression for the Commission. For the reasons explained above and in its Comments, AT&T submits that its proposal to permit the use of the MTS network for the transmission of data to all overseas points would benefit the public.

6. The international record carriers propose that AT&T be precluded from any participation in overseas message data service. In essence, they are proposing that, instead of the natural use of the complete integrated MTS network for the overseas transmission of data, special arrangements be artificially inserted when the network is used for such overseas data transmission. The telephone carriers would provide the public switched network at both ends, but the international record carriers would provide the overseas channels interconnecting the networks. Under the record carriers' proposals all data calls, instead of flowing smoothly over the integrated MTS network, would have to be routed to the gateways of the record carriers where they would be switched to overseas facilities of such carriers for transmission to the overseas destination. At the destination the calls would again be switched to the public switched network for transmission to the called parties. The process would be reversed in the case of data calls originating at overseas points

destined for called parties in the United States. Under this arrangement, the random occasional user with a simple data requirement would be faced with the problem of discovering how to arrange for his overseas call, determining which record carrier or carriers serve the intended destination, the record carrier services available, and which would best serve his needs.

7. It is obvious that, instead of the natural operation by which simple data calls to overseas points would be handled over the integrated MTS network, the record carriers' proposals to exclude AT&T would introduce complications which would not only increase costs but introduce unnecessary inconvenience to those customers whose data requirements could easily be handled by the MTS network. Data users who do not have specialized data requirements should not be burdened with the risks inherent in divided responsibility and the costs of the more specialized switching and transmission facilities and operating arrangements which would be involved in the plans proposed by the international record carriers for handling specialized data requirements.

8. WUI proposes that the present limitation on the record carriers' authorization to use voice in connection with their international data/voice dial-up service to "cue and contact control" be deleted. WUI has made no showing that such proposal is necessary for a determination of the basic issue raised in this proceeding, namely, which carrier or

carriers should be authorized to provide overseas dial-up data service. AT&T submits that such an issue is extraneous to this proceeding and would unduly delay the resolution of the already involved issues herein.

9. The record carriers express grave concern that AT&T's entry into the overseas message data business would divert substantial revenues from their overseas services and jeopardize their viability. Their professed concern merely parrots an argument which was advanced in the TAT-4 case. Nine years later the record carriers make the same self serving statement without one iota of evidence to support it. AT&T's proposal does not constitute a new entry by AT&T into the field. Nor does it challenge the custom data services which the international record carriers propose to provide. Since 1965 - or for the last eight years - AT&T's and Hawaiian Telephone Company's MTS customers have been permitted to use the MTS network for the transmission of data messages between the Mainland and Hawaii. From 1965 to 1970, the total annual revenues of the international record carriers from their telex service with Hawaii, which might be expected to be affected by the use of the MTS network for data service, increased from $561,735 to $1,849,269, or an increase of 329%.[1] This growth in revenues and the actual growth of the record carriers' business on the Mainland-Hawaii route as indicated by their increasing circuit requirements in the past and their forecasts of future

1 "Statistics of Communications Common Carriers" issued by the Federal Communications Commission, year ended 1965 (p. 162, table 23) and year ended 1970 (p. 169, table 24).

growth in such requirements for service on the route indicate that the record carriers need have little concern about the effect on their Mainland-Hawaii business of the use of the MTS network for data transmission. The reason is relatively simple. MTS data transmission has filled, and continues to fill, a gap in the available spectrum of record transmission. By providing the flexibility of random paths and alternate voice/data, use of the MTS network for data transmission meets the demand of many users who would not otherwise avail themselves of other record service offerings. In reality, such use of the MTS network has served to stimulate the demand for all record traffic, expanding the use of other record services as well. The experience on the Mainland-Hawaii route with the high degree of affinity in the business community between the Mainland and Hawaii portends no serious adverse effect of such use of the network on the business of the record carriers on other overseas routes.

10. AT&T's proposal is, in fact, not irreconcilable with the aspirations of the international record carriers with respect to the furnishing of overseas data service as expressed in their comments. AT&T does not propose to offer an overseas message data service, as such, to the exclusion of the data services of the record carriers. AT&T merely proposes that its overseas MTS service be made available to its MTS customers, on a permissive use basis without embellishment, for the transmission of data messages to all overseas points. In

their Comments, all the record carriers assert, in one form or another, that they are in a better position to provide customized high speed data services. AT&T has recommended in its Comments that the carriers be allowed to expand and develop this customized service and that they be allowed to interconnect such service with the public switched network.[1] However AT&T also maintains that the customer whose needs can be met most easily and economically by the MTS network should be allowed to use the network for that purpose. There is room in the growing overseas data market for service both by AT&T and the international record carriers.

11. The availability of both the specialized data services of the international record carriers and the permissive use of the overseas MTS network for transmission of data by those customers who do not require the specialized services of the record carriers, or for other reasons prefer to use the MTS network, would offer data users a choice of services in seeking to meet their needs, which both Xerox and Computer and Business Equipment Manufacturers Association strongly recommend in

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1 AT&T now permits connection of the international record carriers' services with the public switched network. WUI is in error in implying in paragraph 4 of its comments that AT&T has been unwilling to negotiate regarding interconnection until "the past few months". Beginning late in 1971 AT&T tried to arrange a meeting with WUI to negotiate the terms of an interconnection agreement. It was not until recently that WUI agreed to meet.

their comments. The public benefits derived from a "wider range of choices as to how customers may best satisfy their expanding and changing requirements for specialized communication service" were recognized by the Commission in Specialized Common Carrier Services, 29 F.C.C. 2d 870, 909-910.

12. The record carriers profess concern that AT&T's participation in overseas data transmission would subvert the Commission's present policy of meaningful competition in the specialized services market. Such subversion is actually what the record carriers are advocating. They would have the Commission adopt a policy of "protectionism" against meaningful competition by AT&T. Denial to AT&T's customers of the use of its MTS service for overseas data transmission would be patently inconsistent with the Commission's objectives in adopting the "full and fair" competition standard. It would result in an arbitrary, regulatory-administered division of the market and deny the public benefits which the Commission has determined competition provides. Such a "protective umbrella" policy is diametrically opposed to the policy of meaningful competition set by the Commission in the Specialized Common Carriers Services case.

13. Accordingly, AT&T urges that the Commission authorize AT&T to permit its customers to use the MTS service, on a permissive basis, for the transmission of data messages to all overseas points. It is neither necessary nor in the public interest to place arbitrary and artificial limitations on the right of MTS customers to make a very natural use of the MTS network for the overseas transmission of data which the network is capable of handling.

Respectfully submitted,

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

By _____
J. Hugh Rolle, Jr.

By _____
Charles F. Martin

By _____
Mary S. Lenard

Its Attorneys
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Dated: March 27, 1973

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I, Anna L. Andersen, hereby certify that a copy of the foregoing "Reply Comments" of American Telephone and Telegraph Company was mailed, postage prepaid, on this 27th day of March, 1973, to the following:

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Via
Air Mail

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19558

REPLY COMMENTS OF
RCA GLOBAL COMMUNICATIONS, INC.

Francis J. DeRosa
Charles M. Lehrhaupt
Attorneys for
RCA Global Communications, Inc.

Before the
FEDERAL COMMUNICATIONS COMMISSION
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Before the
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Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)	Docket No. 19558

REPLY COMMENTS OF RCA GLOBAL COMMUNICATIONS, INC.

RCA Global Communications, Inc. ("RCA Glōbcom") hereby replies to comments filed by other parties in response to the Commission's Notice of Inquiry (FCC 72-673) into whether switched voice/data, data-only and facsimile services should be authorized between the United States and overseas points, and which carrier, or carriers, should be authorized to provide these international record services.

In our Comments, RCA Glōbcom proposed a plan to provide a computerized switching system for handling overseas data and voice calls which we believe will offer the public significant advantages and improvements over the domestic Dataphone service presently offered by American Telephone and Telegraph Company ("AT&T"). We pointed out that AT&T is basically geared to serve voice users. Its overseas facilities were not designed with data transmission purposes in mind and the service it plans to offer does not approach the standards of our technical proposal for meeting the needs of data customers. On the other hand, RCA Glōbcom will provide superior transmission capability, as well as special features for handling data not previously available.

To assure these substantial benefits to the public, it is essential that the Commission adopt a policy which will enable rather than discourage beneficial competition for overseas switched voice/data, data-only and facsimile services. Accordingly, our Comments strongly advocated that RCA Globcom and other technically and financially qualified voice/record carriers, and not AT&T, be authorized to provide these services.

We stressed that the fundamental issue presented by this Inquiry was whether the Commission should authorize AT&T, with its enormous financial resources and other monopoly advantages in both domestic and international communications, to extend its domination to the international record field. We urged that such an extension of AT&T's already demonstrably dominant position in voice communications would irreparably impair or destroy the viability of the international voice/record carriers, would conflict with established Commission policy to foster meaningful and real competition, and would be contrary to the public interest.

Our response noted that there is a potential market for these record services large enough to support competition among the qualified international voice/record carriers but not large enough to allow entry to AT&T. We submitted that the extension of AT&T's domestic Dataphone service to overseas points would have a major adverse impact on future revenues from international telex, the international voice/record carriers' principal growth service, which in turn would threaten the viability of these carriers.

The Commission furthermore must consider the fact that the revenues of the overseas telephone carriers are growing much more rapidly than those of the international voice/record carriers. Despite the Commission's TAT-4 Decision in 1964 barring AT&T from the international leased voice/record channel market (37 FCC 1151), in the years since 1964 monopoly overseas telephone revenues have quadrupled and today are almost double competitive record revenues. It would serve no public purpose to adopt a policy which would further increase AT&T's domination of the international communications market at the expense of the competitive voice/record carriers. Even without overseas Dataphone, AT&T has projected a 400 percent increase in overseas telephone calls by 1980, which far exceeds the most recent forecasts for record growth in the same period.* In view of the relative market positions of AT&T and the voice/record carriers, to allow implementation of switched voice/data services via the overseas telephone network will inevitably lead to the undermining of the international voice/record carrier industry and insure an AT&T monopoly in international record as well as voice communications.

In their respective submissions, ITT World Communications Inc. ("ITT Worldcom") and Western Union International, Inc. ("WUI") also emphasized the critical importance of barring AT&T from invading the overseas record field because it would have an unfair competitive advantage over the international voice/record carriers. To assure that the international voice/record carriers will continue to be able to provide

*In its "U.S. Industrial Outlook 1973," the Department of Commerce states that revenues from international telephone service are expected to approximate $597 million in 1973, an increase of 27 percent over 1972 estimated revenues of $470 million. International telephone revenues are expected to total about $3.5 billion in 1980, reflecting a compounded annual growth rate of 29 percent. By comparison, an annual increase of 16 percent is forecast in international record revenues. By 1980, telephone revenues will be almost 4 1/2 times record revenues. (Commerce Today, March 5, 1973, p. 21).

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their other vital and essential services to the public, they must be given the fair opportunity to develop the market for overseas switched voice/data, data-only and facsimile services which can only be accomplished if AT&T is not authorized to offer similar services.

As the Commission itself has recently recognized, there are no valid reasons for permitting AT&T to provide any type of overseas record service (Memorandum Opinion and Order of November 8, 1972, 37 FCC 2d 1043, 1048). A fortiori it would certainly be adverse to the public interest to authorize AT&T to expand its overseas record services.

RCA Globcom respectfully submits that, in the exercise of its public interest responsibilities, the Commission must adopt a policy in this proceeding looking toward the long-range maintenance and development of the most effective applications of communications technology rather than to any short-term expedient. With this basic premise in mind, RCA Globcom replies to specific allegations of other respondents to this Inquiry as follows:

1. American Telephone and Telegraph Company

AT&T takes the position that the Commission should remove existing restrictions on the use of the public switched telephone network for the overseas transmission of data, subject only to the technical capability of the facilities involved. AT&T contends that "permissive" use of the telephone network for data transmission would enable the public to make data calls in the same manner as ordinary telephone calls. AT&T also alleges that it

is not practical in any event to enforce restrictions on data use of the telephone network without development and installation of costly surveillance and detection equipment.

AT&T further gratuitously recommends that the international voice/record carriers should continue to be authorized to provide Datel service and that its domestic facilities should be interconnected to the overseas facilities of the record carriers to provide this service. In AT&T's concept of the appropriate relationship between Dataphone and Datel, Datel should be continued to be made available by the voice/record carriers for use by data users whose requirements AT&T's facilities might not accommodate.

Taking this latter recommendation first, it is sufficient to note that the overseas Datel service offered by the voice/record carriers presently provides less than $400,000 a year in total industry revenues. In addition, most existing Datel subscribers do not use this service for high-speed data transmission but rather to transmit telegram and telex type traffic in bulk at a lower rate. There is no doubt that if AT&T were authorized to provide Dataphone internationally, the revenue presently being derived from Datel service by the international voice/record carriers would be diverted at least in part to AT&T. Accordingly, not only is AT&T offering nothing by recommending that both Dataphone and Datel be provided internationally, but in fact if such a recommendation were adopted by the Commission it would open the door to an AT&T takeaway of existing Datel business as well as telegram and

telex business. In practice, we submit AT&T's proposal would promote an AT&T monopoly of the market for overseas switched voice/data and data-only services while at the same time decreasing demand for the other services of the international voice/record carriers.

Although Datel has not heretofore been a major source of revenue to the international voice/record carriers, RCA Globcom believes that it will in the future with the anticipated rapid development of computer-to-computer data transmission internationally which is generally predicted to follow the explosive growth pattern experienced in the United States.* AT&T itself forecasts an overseas Dataphone market in 1980 of some 4 million calls and 24 million minutes (AT&T Comments, pp. 14, 17). This compares to AT&T's estimate of the monopoly overseas message telephone market in 1980 of 200 million calls. It therefore appears that while the overseas Dataphone market will be de minimis to AT&T, it nevertheless will constitute a sizeable volume of business for the much smaller competitive voice/record carriers. Under the circumstances, it would be destructive for the Commission to allow AT&T to serve this market, notwithstanding the long-term impact such a ruling would have on the voice/record carriers and their ability to provide their other important services.

While AT&T cites convenience as the main reason to have the Commission remove immediately all restrictions on the use of its facilities for overseas data calls, the only operational

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*As pointed out in RCA Globcom's Comments in this proceeding (pp. 36-41), there is considerable material available to support the growth projected for the international switched voice/data market including the Arthur D. Little World Telecommunications Study (1972) and the Department of Commerce Global Market Survey (1970).

disadvantage to which AT&T specifically refers in having another carrier provide the international facility is the need to route data calls via that carrier. We deem it significant, however, that AT&T foresees no difficulty operationally in connecting its domestic system with the international facilities of the voice/record carriers to provide Datel service. AT&T further concedes that the voice/record carriers "may be presumed to have the experience and competence to provide the service" (AT&T Comments, p. 20). With respect to inbound traffic into the U.S., in most cases the same entity operates both voice and record communications at the foreign terminal and would be able to route data calls bound for the AT&T domestic system via the international voice/record carrier's facilities in the same manner as Datel calls are presently handled. With this background, we fail to see what "inconvenience to [AT&T] customers and impairment of the service" might result if overseas switched voice/data service is provided only on an interconnected basis, with the voice/record carriers supplying the international facility. Moreover, even AT&T admits that it is not "feasible" to measure these factors at this time.

It is true that the international voice/record carriers will incur some additional costs in providing the service, but AT&T, contrary to its response on page 16 of its comments, would also necessarily incur costs for transmission facilities and switching plant to handle the volume of data calls it projects. In assessing the relative costs of service, however, the Commission must further compare the type

of service which RCA Glōbcom is planning to offer, which is designed to accommodate the particular needs of data users, with the type of service AT&T contemplates. AT&T proposes no service enhancements or improvements (AT&T Comments p. 18). RCA Glōbcom, on the other hand, will apply the latest techniques for handling data through the use of a specially-programmed computer which will maximize the service advantages to be derived by the public. Among other things, we will guarantee the data customer a conditioned overseas circuit, make available a cable circuit where a satellite route may not be desirable, and monitor the circuit operating criteria while the call is in progress. In fact, AT&T may not be able to provide higher data rates without taking some of the precautions which RCA Glōbcom proposes and we believe it would be more costly to AT&T to do this.

While AT&T dwells at length on the peculiar benefits of using the public switched telephone network for overseas data calls, we submit that the public would receive the same benefits were the overseas transmission medium to be furnished by an international voice/record carrier as well as the additional benefits of the service innovations for data which we will provide and which AT&T will not.

AT&T finally urges that the Commission has no choice but to authorize it to provide overseas Dataphone service since it is allegedly not practical to enforce the prohibition on the use of the telephone network for data transmission. We find this

argument by AT&T singularly unpersuasive as a rationale for its expanding into international switched data or other voice/record services. Indeed, were the Commission to accept this reasoning in the face of the strong public policy considerations for keeping AT&T out of the overseas voice/record field, it would be tantamount to an admission that AT&T has outgrown effective regulation. With its technological knowhow and broad resources, we believe AT&T has the capability to enforce the prescriptions contained in its tariffs and could reasonably be required to electrically measure the traffic flow on its overseas trunks on a regular basis to determine whether unauthorized data transmissions are taking place. The type of monitoring we refer to would not actually read the intelligence being passed, but only indicate whether a voice or data use is being made.

RCA Globcom accordingly submits AT&T has failed to show why the Commission should depart from its long-standing policy barring AT&T from providing overseas voice/record services. If anything, in the light of the much more rapid rate of growth of message telephone service contrasted to record growth, the reasons for continuing to restrict AT&T are more compelling today than they were in 1964 when the Commission issued its TAT-4 Decision.

As pointed out in our Comments, the extension of switched voice/data service to overseas points will necessarily have a severe adverse impact on future revenues from international telex, the international voice/record carriers' principal growth service, which will only be compensated in part if the record carriers are the sole providers of the switched voice/data service. It should also

be noted that unless AT&T is restricted from providing Dataphone internationally, it would be uneconomic for the voice/record carriers to attempt to provide similar services. With AT&T's intrinsic advantages and domination of both the domestic and overseas markets, the voice/record carriers would be in no position to justify the capital outlays necessary to provide and develop these innovative services.

We submit therefore that the Commission must adopt a policy in this proceeding which will assure that the public will receive the benefits of the service enhancements for switched voice/data proposed by RCA Globcom which can only be accomplished if RCA Globcom, and other qualified international voice/record carriers, and not AT&T, are authorized to provide these services.

2. Hawaiian Telephone Company

Hawaiian Telephone Company ("Hawaiian"), in its comments, basically supported without qualification the position taken by AT&T regarding the unrestricted use of the public switched telephone network for overseas data calls. Therefore, the general points which we have previously raised with respect to AT&T are equally applicable to the Hawaiian filing and need not be repeated at length here.

While Hawaiian operates on an interconnected basis with the international voice/record carriers for the transmission of switched overseas telex traffic to and from its Datatel facilities in Hawaii and further connects its voice-grade facilities in Hawaii with overseas private line channels furnished by the international voice/record carriers, it nevertheless argues that such interconnection

arrangements in the case of overseas transmission of data calls would contribute to service degradation (Hawaiian Comments pp. 4-5). This argument, we submit, is without merit. On the contrary, the enhancements for the handling of switched data contemplated by RCA Glōbcom will promote the improvement of service to the public.

Hawaiian further asserts that AT&T is the only U.S. carrier with which it has interconnected its switched telephone network facilities. This is also not factual. As the Commission is aware, Hawaiian presently operates joint circuits for telephone services between Guam and Hawaii with RCA Glōbcom. In addition, it has agreed to joint operation with RCA Glōbcom of foreign exchange channels between the Mainland and Hawaii pending the outcome of its appeal of the Commission's Order (37 FCC 2d 1043) authorizing RCA Glōbcom to provide this service through to Hawaiian's terminal in Honolulu.

RCA Glōbcom submits that Hawaiian has cited nothing which could reasonably lead the Commission to conclude that its ability to provide an acceptable level of service would be impaired if overseas switched voice/data, data-only and facsimile services were provided on an interconnected basis with the voice/record carriers. Under the circumstances, the overriding public policy considerations in favor of limiting the provision of these services to the voice/record carriers clearly must take precedence over any purported additional burdens upon Hawaiian which have heretofore not prevented it from operating profitably on an interconnected basis with these carriers.

3. United States Independent Telephone Association

The United States Independent Telephone Association ("USITA") would urge that the AT&T facilities with which its member companies interconnect should be used for the provision of overseas Dataphone service. Since these carriers would not themselves be directly involved in furnishing the overseas service (USITA Comments, p. 1), they would be subject to the same arrangments which AT&T would have with the voice/record carriers for the handling of overseas data calls. Accordingly, no additional inconvenience or expense should result to these carriers whether the international transmission medium is furnished by AT&T Long Lines or an international voice/record carrier which is electrically interconnected with AT&T's facilities.

In this connection, it should be noted that the domestic portion of the public switched telephone network is to be used for overseas switched data calls regardless of which carrier or carriers furnish the overseas facility. The question in this proceeding is whether the voice/record carriers will be the sole providers of the overseas circuits to be used for this service as they are for all other overseas record services.

4. Communications Satellite Corporation

Communications Satellite Corporation ("Comsat") has made a largely technical submission designed to show that satellite circuits are suitable for all forms of data transmission currently in use on terrestrial circuits, including Dataphone. Comsat concedes, however, that some error control systems, such as the start-stop

ARQ system, are not compatible with satellite transmission (Comsat Comments, pp. 2-4, 8).

RCA Glōbcom has indicated that it is prepared to use both satellite and cable channels to provide its proposed overseas switched voice/data service (RCA Glōbcom Comments, pp. 29-30). However, recognizing the undesirability of using satellite circuits for data under certain circumstances, that is, where double-hops may be encountered or where the customer's terminal equipment may not function as well on satellite, RCA Glōbcom will program into its computer the capability of selecting a cable channel for the overseas path so that the user will obtain a superior facility for his particular needs. This is an additional advantage to the public of the proposed RCA Glōbcom switched voice/data service over the service which AT&T would offer.

RCA Glōbcom, however, strongly takes issue with Comsat's recommendation that both AT&T and the international voice/record carriers be allowed to provide the service. As stated above, contrary to making available to the public in the most efficient way the benefits to be derived from Dataphone service, this would instead promote an AT&T monopoly of the service and reduce demand for the other services of the international voice/record carriers.

Comsat's position in this proceeding clearly favors AT&T, notwithstanding Comsat's responsibility, having been vested with exclusive control of the international space segment, to be non-discriminatory in its dealings with authorized carriers. The

Commission has recently expressed concern that the interrelationship between AT&T and Comsat would adversely affect competition for new services and took steps designed to achieve maximum separation of AT&T from Comsat (Memorandum Opinion and Order of December 21, 1972, 38 FCC 2d 665, 678-680). If AT&T were authorized to provide Dataphone to overseas points as recommended by Comsat, this would lead to the weakening of the international voice/record carriers and tend to solidify further the relationship between AT&T and Comsat which the Commission has determined is counter to the public interest.

On the other hand, if international switched voice/data service is provided in an environment where real competition is possible, it will promote service improvements such as those suggested by RCA Globcom and increase utilization of the service. RCA Globcom submits therefore that the public interest in the maintenance of a healthy, viable international voice/record carrier industry would also appear to be in Comsat's self-interest as a carrier's carrier serving this industry.

5. Western Union Telegraph Company

The Western Union Telegraph Company ("Western Union") correctly points out that there are substantial policy reasons, including the Commission's TAT-4 Decision and the 5-year restriction on AT&T's provision of low-speed modems (up to 300 bps) to its Dataphone customers, to prevent AT&T from providing international Dataphone service. However, Western Union also expresses concern

about the international voice/record carriers being authorized to provide the service under existing circumstances.

Western Union's principal fear apparently is a diversion of overseas telex business which it provides on an interconnected basis with the voice/record carriers to Dataphone which would result in a loss of revenue to Western Union. We agree with Western Union that there is no question but that the authorization of overseas switched voice/data service will seriously impact international telex. However, if AT&T were to provide the service, Western Union would suffer the same, or perhaps even greater, telex revenue loss and the far smaller international voice/record carriers, which are much less able to withstand such losses than is Western Union, would stand to lose significant and irreplaceable revenues as well.

Western Union further alleges that if AT&T connects with the international voice/record carriers for the provision of overseas switched voice/data service, the voice/record carriers would really be "carrier's carriers" and, as such, should be restricted from offering any services directly to the public. The absurdity of this proposition is as manifest as is its lack of support in either Commission precedent or industry practice. We submit it amounts to nothing but an offhand attempt by Western Union to inject a spurious issue into this proceeding. The international voice/record carriers would no more become "carrier's carriers" by virtue of their providing overseas switched voice/data service on an interconnected basis with AT&T's domestic facilities than they are at

present when they interconnect with Western Union's domestic TWX and telex networks for overseas telex or with Western Union's Broadband Exchange Service for international Datel. It is moreover especially unconvincing for Western Union to take this tack in view of its current efforts to use other carriers to export its domestic Mailgram service to overseas points.

6. Xerox Corporation

Xerox Corporation favors Commission authorization of both AT&T and the voice/record carriers to provide overseas switched voice/data and facsimile services.

Xerox states that the Commission's decision herein will have a significant influence upon the development of international networks and facilities as well as systems research and product development leading to new communication capabilities (Xerox Comments, p. 2). RCA Glōbcom agress with this basic assessment of the role of this Inquiry., Where we differ with Xerox is in the method which is best designed to achieve the "imaginative extrapolation of present and anticipated international communication capabilities" which Xerox envisions.

We submit that in the overseas switched voice/data and facsimile market, real and meaningful competition among the qualified international voice/record carriers will maximize application of the

latest technologies. The proof of this is the innovative type of system for the handling of switched voice/data calls proposed by RCA Glōbcom as compared to the AT&T proposal which would furnish nothing to data customers but a connection and a line without regard to the special needs associated with computer-to-computer data transmission.

Accordingly, to obtain the long-range goals sought by Xerox, the Commission should authorize RCA Glōbcom, and other qualified voice/record carriers, and not AT&T, to provide overseas switched voice/data, data-only and facsimile services.

In conclusion, RCA Glōbcom strongly recommends that the public interest requires Commission action authorizing the provision by RCA Glōbcom and other qualified international voice/record carriers of overseas switched voice/data, data-only and facsimile services through interconnection with the domestic public telephone system and other domestic networks and a continued strict prohibition on AT&T's provision of such international voice/record services.

Respectfully submitted,

RCA GLOBAL COMMUNICATIONS, INC.

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s/Charles M. Lehrhaupt

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March 28, 1973

CERTIFICATE OF SERVICE

I, Audrey Gadson, hereby certify that on this 28th day of March, 1973 I mailed a copy of the foregoing "Reply Comments of RCA Global Communications, Inc." in Docket No. 19558 by United States mail, postage prepaid, to the following persons:

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service.	)))	Docket No. 19558

REPLY COMMENTS OF
THE WESTERN UNION TELEGRAPH COMPANY

The Western Union Telegraph Company (Western Union) herein replies to the comments submitted in the above-captioned proceeding. The submissions by the commenting parties demonstrates the difficulty in determining the proper course to follow for the development of an international alternate voice/data service. Conflicting viewpoints reflected in the comments can be grouped into three major areas, each of which is represented by a fundamental question which must be resolved, These questions are:

1. Which entity or entities, if any, should be permitted to provide international alternate voice/data service?
2. What will be the effect of such services upon existing service?
3. What is the technical and operational feasibility of providing such services via satellite?

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1. Of the three, the most critical is the effect of an international alternate voice/data service upon the existing revenues and services of the record carriers, including Western Union. Regardless of the entity or entities which may be authorized to provide the service, all parties envision a substantial diversion of revenues and traffic from international Telex service. Thus, one of the essential arguments of the international carriers in support of their contention that they alone, to the exclusion of AT&T, should be authorized to provide international alternate voice/data service, is the projected massive diversion of existing Telex revenues to the new service. Because of such massive diversion, the international carriers contend that they will suffer irreparable injury unless they are authorized to provide the service.

2. This argument, we submit, begs the question. A most disturbing estimate of diversion is provided by ITT WorldCom on page 47 of its comments. ITT estimates that, "in 1976, diverted Telex minutes between the United States of America and the foreign destinations...would result in a minimum loss of gross retained Telex revenues of almost $5 million. This is more than eight times the gross retained revenues that ITT WorldCom estimates it will derive from providing international dataphone service during that year." (Emphasis supplied) This is a most disturbing

statement since all of the international carriers indicated that international Telex service has become a principal source of revenues and profits. Thus, regardless of the entity or entities that will provide the new service, all parties expect that international Telex service will be severely impacted. The adverse effects of such a result would manifestly be felt in the domestic Telex and TWX service provided by Western Union.

3. The ultimate effect upon record communications services in general and international record services in particular have not been adequately addressed in the comments submitted. Until the Commission can determine the nature and structure of the international record communications industry after international alternate voice/data services (other than existing Telex and Datel) are introduced, a decision upon authorizing such a service initially should not be made.

4. Only after a thorough study of the above question can a decision be made with regard to the proper entity or entities, if any, which should be permitted to provide the service.

5. Another essential question, i.e. in regard to the feasibility of the provision of such a service by satellite circuits, has produced apparently conflicting opinions. COMSAT stated in its comments that there are no essential problems with regard to satellite transmission of data communications. RCA GlobCom in-

dicates that, while there may be some problems with regard to error rate, such problems can easily be overcome. The other parties that addressed this question, however, indicated that satellite transmission of data provides severe problems and that, as a result, international data services would have to be provided by means of cable facilities. The respective differences in position on this subject reflect the commenting parties assessment of the availability of terminal equipment that would serve to reduce the error rate to acceptable limits. ITT appears to present a most realistic viewpoint with regard to this question, by acknowledging that while in the future more sophisticated error detection and correct equipment will be developed, the error rate problem will nevertheless remain since much of the existing inadequate equipment will still be utilized by subscribers well into the future.

6. The Commission should, in our opinion, assume that virtually all international dataphone traffic will be transmitted via cable facilities rather than via satellite. A determination of the circuit requirements for providing such a service should thus be compared with the existing and proposed transoceanic cable capacity with due regard given to existing estimates for circuit requirements to provide international voice and record traffic for the remainder of this decade. Such estimates have not been presented to the Commission in the context of this proceeding. However, an analysis of future circuit requirements is essential in the Commission's determination of the entity or entities that would be providing the data services.

7. In any event, should the international record carriers be authorized to provide international dataphone service, it appears that they would simply interface with AT&T in transmitting dataphone overseas. As we indicated in our comments, unlike Telex, the international record carriers would be in no position to be a retailer of such services as well as the transmitting carrier. As a result, the international record carriers would be in the anomalous position of interconnecting with AT&T for the transmission of a service which is diverting revenues from Telex service, a service which the international record carriers market vigorously in the United States. If these circumstances should obtain, and there is a sufficient demand for dataphone service with the international record carriers providing the overseas transmission facilities, the Commission should re-evaluate the proper role of the international record carriers as a retailer of communication services in the United States. It may well be that should the international record carriers be authorized to transmit international dataphone, that the international record carriers would be evolving into a "carrier's carrier" and as such they should be restricted from selling any service to the public because of the obvious conflicts and anomalies that would result.

8. In conclusion, the threshold questions essential to the development of a proper policy in this matter have not been adequately answered. A proposal that has the potential to re-

structure the international record industry and adversely impact the domestic record carrier in the porcess, cannot as RCA GlobCom attempts to do, be likened to the Commission's action in the Specialized Common Carrier Inquiry (Special Common Carrier Services 29 FCC 2d 870 (1971)). RCA advances the proposition that where new services are offered, the public will be benefitted by "real competition." However, as indicated by all of the international record carriers, the provision of international data services as proposed herein could supplant significantly the heart of international record communications, i.e. international Telex. The rationale of the Specialized Common Carrier decision was that the Commission would be authorizing a supplement to existing private line communications services. Thus, the essential question is not the intramural one of whether or not AT&T should be barred from providing international dataphone service or conversely, whether AT&T should be the only carrier to provide it. The question not yet addressed is what effect international dataphone service will have on the record communication industry and on the public interest. For these reasons, we urge the Commission to issue a Further Notice in order to develop further information in accordance with the above comments.

Respectfully submitted,

THE WESTERN UNION TELEGRAPH COMPA

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March 28, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service	)))	DOCKET NO. 19558

REPLY COMMENTS OF
HAWAIIAN TELEPHONE COMPANY

The following comments are respectfully submitted by Hawaiian Telephone Company (Hawaiian) in reply to comments filed herein by ITT World Communications, Inc. (ITT), RCA Global Communications, Inc. (RCA), and Western Union International, Inc. (WUI).*

In its initial comments, Hawaiian pointed out the complete availability and suitability of the toll telephone network for Dataphone traffic. Hawaiian also noted the practical impossibility -- as well as the total inconsistency with the Commission's Carterfone decision and its actions in the interconnection field subsequent to that decision -- of barring a customer's use of acoustically coupled (or electrically coupled, for that matter) equipments to the toll telephone

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* While the ITT-RCA-WUI comments with respect to size, competitive impact, TAT IV and similar matters are directed to AT&T (and indeed are wholly inapplicable to Hawaiian) the fallout effect of similarly aimed comments has been felt by Hawaiian in the past. The desirability of responding now, rather than silently speculating over future fallout possibilities, was thus indicated.

network. Surely, ITT-RCA-WUI are aware of these facts. Yet with varying degrees of intensity, each urges that overseas telephone conversations be suspended for such period of time as might be required for the insertion of a record carrier provided voice grade overseas circuit before the customer may transmit such facsimile or data as he wishes to send. Perhaps alternatively, it may be assumed that ITT-RCA-WUI would each be pleased to provide the telephone portion of overseas communications services and reverse Carterfone, with customers being forbidden to use customer provided equipment for overseas calls unless the overseas circuit is provided by a record carrier.

It would seem that such awkward and cumbersome results could be justified, if at all, by most serious and weighty public interest considerations. ITT-RCA-WUI offer no public interest benefits, however, but only a plaintive plea for protection against AT&T. It is true, of course, that this plea found sympathetic reception nine years ago in the TAT IV decision (37 FCC 1151), where the Commission found with respect to alternate voice-data private line service, "It is in the public interest that we assure the viability of the record carriers by protecting them from the losses they would inevitably suffer were AT&T permitted to provide this voice-record service" (37 FCC, at 1159).

Extension and expansion now, however, of this theory -- a theory of doubtful legality and efficacy even in 1964 -- to any and all communication services for which telephone company - record carrier competition may be feasible would seem to suggest a critical reexamination of its continuing public interest validity, not a mere recitation and repetition of its phrases. And in that reexamination it must be emphasized that for consideration and decision here it is not a question of new facilities or innovative services, but simply the use of the existing telephone toll network for a service long provided domestically.

Also for consideration in evaluating the ITT-RCA-WUI protection by exclusion approach to competition is the simple question "Why?" If, as appears to be the case, protection is sought because in its absence a major part or all of overseas Dataphone service would be provided by AT&T and other telephone companies, again the question must be asked--"Why?" And if the answer may be found in the possibility that the overseas Dataphone market would receive better service at lower rates (See, e.g., RCA Comments, p. 13) is this not an objective to be sought by the Commission? And if denial to the public of better service at lower rates is the price of record carrier economic viability, then perhaps the time has come to reexamine the entire question of whether

the public interest is served by assuring the viability of record carriers. If competition is to become the hallmark of current regulatory thinking, the competitive approach clearly is not served by excluding from competition the more able and better qualified competitors.

In this context, ITT-RCA-WUI seek to demonstrate continuing adherence by the Commission to the TAT IV umbrella theory by citing and quoting RCA, 37 FCC 2d 1043 (1972); Domestic Satellite, __ FCC 2d ____, 26 R.R. 2d 465 (1972); CATV Section 214 Certificates, 21 FCC 2d 307 (1970); and Guard Band Frequencies, 12 FCC 2d 841 (1968). The record carriers appear to have not only misread or misconstrued each of these decisions, but have also ignored expressions of judicial opinion on review of two of these decisions.

In RCA, for example, the rationale of the decision was not the dictum quoted by RCA (Comments, p. 9) nor a competitive exclusion, but rather the introduction of competition for voice traffic because of the existence of competition for record traffic. While Hawaiian has questioned the soundness of that decision on other grounds (Petition for Review pending in No. 72-1018, Ct. App., D.C. Cir.) it can in no way be cited as an extension of protectionism.

In Domestic Satellites, perhaps the most recent expression of the Commission's views on competition, a somewhat lightened competitive handicap was placed on AT&T

in the Commission's final decision (it cannot for 3 years use domestic satellites for private line service to non-federal government customers). But this competitive handicap is most noteworthy as the vehicle for the separate exposition of views on competition, market division and protective umbrellas by Chairman Burch and Commissioners Reid and Wiley.* It would appear that the TAT IV Commission has changed.

The CATV Section 214 case cited by ITT (Comments, pp. 8-9) and RCA (Comments, pp. 9-10) is wholly irrelevant to a discussion of competition with AT&T for the simple reason that "The central problem . . . the anomalous competitive situation between CATV systems affiliated with the telephone companies, and those which have no such affiliation . . ." (21 FCC 2d, at 323) did not involve AT&T. Moreover, as the court pointed out in that case on appeal, telephone companies remain free to construct and operate broadband cable facilities for non-CATV uses, without FCC approval and to compete for CATV business outside their service areas (449 F. 2d 846, 860).

Although AT&T was directly involved in the Guard Band cases, here again the opinion of the court on appeal suggests an approach to competition quite different than

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* "Candidly, carving up the marketplace and unfurling protective umbrellas are abhorrent to me in principle. . .".

that urged by ITT-RCA-WUI. For while the Commission (and the court) found wireline and non-wireline equality of treatment appropriate, the basic thrust of the Commission's rules, sustained by the court, was the preservation and encouragement of competition between wireline and non-wireline carriers in the provision of signaling services, services in which "wireline and non-wireline carriers have been competing successfully for some time . . ." (409 F. 2d 322, 327). Parenthetically, the court in that case rejected contentions remarkably similar to those of the record carriers here (e.g., the mere size of AT&T would attract its customers to its service, and AT&T has used high profits in monopoly markets to support low prices in competitive markets) with the statement that "The horrors charged rest on conclusions and not facts" (409 F. 2d, at 330). And see also the Commission's Memorandum Opinion and Order (FCC 72-1185, released December 29, 1972) in Docket No. 19129, where similar protestations by MCI were characterized and rejected by the Commission as ". . . suppositions, allegations and innuendos that are mere conclusions totally unsupported by any factual showing."

Perhaps most noteworthy, by understandable omission from the string of cases relied on by ITT-RCA-WUI, is

Specialized Carriers, 29 FCC 2d 870 (1971). There the Commission stated (at 915):

> "We do, however, stress our objective to promote and maintain an environment within which existing and any new carriers shall have an opportunity to compete fairly and fully in the sale of specialized services. Our rate-making and regulatory policies and practices will be appropriately adapted to accomplish this objective. There is no reason to deny the public the benefits that may derive from active and vigorous participation by the Bell System and Western Union in this market, so long as their participation is not a burden upon or significantly detrimental to their other services. Thus, it is our intention to permit the existing carriers to price their competitive services in a fashion that will realistically and reasonably reflect economic advantages, if any, that are inherent in the plant and operations of those carriers. Moreover, we subscribe fully to the views of our staff, endorsed by the Department of Justice, that there should not be any 'protective umbrella' for the new entrants or 'any artificial bolstering of operations that cannot succeed on their own merits' (Notice, paragraph 44)."

The promulgation of this policy in a case involving new facilities, new entrants and new services has much to commend its greater and more obvious applicability to the provision of an existing telephone company service using the existing telephone company toll network facilities. Viewed in terms of the public interest, as the basic question here must be, there is no reason ". . . to deny the public the benefits that may derive from active and vigorous participation by the Bell System [and other telephone companies such as Hawaiian] . . ." in the provision of overseas Dataphone service, nor is there reason to depart from the end-to-end

concept so prominent in Domestic Satellite by requiring that Dataphone traffic generated in telephone company exchanges be transferred to record carrier circuits for an ocean voyage before delivery to telephone company exchanges overseas.

For these reasons then, together with those advanced in its "Comments" herein, Hawaiian respectfully submits that the Commission should place no artificial restrictions on its use of its facilities for overseas Dataphone service; but should permit, in the public interest, the fullest and most efficient use of those facilities, in conjunction with facilities provided by its foreign correspondents, for the provision of overseas Dataphone service.

Respectfully submitted,

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March 28, 1973

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas Dataphone service	)))	DOCKET NO. 19558

REPLY COMMENTS
OF
TRT TELECOMMUNICATIONS CORPORATION

TRT Telecommunications Corporation (TRT) has studied the comments filed in the instant inquiry by the other U. S. international record carriers (IRCs), American Telephone and Telegraph Company (AT&T), the Western Union Telegraph Company (WU) and the Communications Satellite Corporation (COMSAT). TRT has found that the comments of these respondents corroborate TRT's comments which, while not quantitative are supported by the quantitative projections of the IRCs, and even those of AT&T.

TRT and the other IRCs all advocate the extension of the TAT-4 decision to include Dataphone for the same imperative reasons which moved the Commission to place limitations on the record service activities of AT&T in the TAT-4 case and subsequent domestic cases involving the specialized carriers and the provision of domestic satellite service. In addition to these reasons, nowhere is it more apparent than in AT&T's own comments on Docket No. 19558 that overseas Dataphone service will be only incidental to AT&T's total service and a very small increment of revenue. As emphasized by TRT and the other IRCs, this small incremental revenue to AT&T is a large incremental revenue to the IRCs and becomes vital to the existence of the IRCs, by virtue of the difference in size

of AT&T and the IRCs. Therefore, these Dataphone revenues and the competition will act as incentive spurs to the IRCs to produce the best possible service for the customer, whereas AT&T, whether it were authorized to provide the service solely or in competion with the IRCs would have less incentive except to further its domination of U. S. Telecommunications.

In addition to the incremental revenue predicted by the respondents to this inquiry, all carriers emphasize the impact on the present record services. Since AT&T is not presently an international record carrier this can only mean that if AT&T is authorized to provide international dataphone service then AT&T will not only gain from the incremental revenue due to growth, but also from present business siphoned away from the present IRCs. Obviously, this places the IRCs in the position of not only having growth limits, but loss of large segments of present business. Thus, entry of AT&T into this field could only result in irreparable harm to the IRCs with consequential loss to the U. S. customers of good record service.

Comments by the carriers which contained statistics and projections for Dataphone use were generally limited to the developed countries of Europe and Asia, where it is anticipated sufficient volume can be obtained to support the introduction of measured time data and facsimile type service. TRT at this time serves only a few of the countries included in the projections, so therefore has not been able to develop quantitative projections or concrete proposals for service. Nevertheless, the basic technical service methods and equipment contained in TRT's comments closely parallel the more detailed description contained in the other IRC's comments.

Based on these submissions, TRT submits that it, as an international record carrier, can offer a unique and valuable service to the U. S. and foreign customers and it is in the public interest and convenience to authorize TRT to provide this service and to exclude AT&T from offering such service. TRT is prepared and willing to make the necessary arrangements with U. S. domestic carriers and TRT's foreign correspondents, and to provide appropriate interconnection between the U. S. domestic switched network and TRT's connected overseas facilities.

Respectfully submitted,

TRT TELECOMMUNICATIONS CORPORATION

By T. Ray Cary Jr.

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March 27, 1973

CERTIFICATE OF SERVICE

I certify that on March 27, 1973 I served the foregoing "Comments" by mailing a true and exact copy thereof by United States Mail to all parties listed in Paragraph 10 of the Federal Communications Commission's Notice of Inquiry instituting said proceeding.

Ruth B. Crane

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas data/voice demand service.	))))	Docket No. 19558

REPLY COMENTS OF WESTERN UNION INTERNATIONAL, INC.

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March 28, 1973

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Inquiry into policy to be followed in future authorization of overseas data/voice demand service.	)))	DOCKET NO. 19558

REPLY COMMENTS OF WESTERN UNION INTERNATIONAL, INC.

Western Union International, Inc. (WUI) respectfully submits herewith its reply to the comments of the other parties in the above-captioned Inquiry.

1. Actions by both the American Telephone and Telegraph Company (AT&T) and New York Telephone Company (NYTelCo) since WUI filed its initial comments herein underline the vital public interest significance of WUI's recommendation that:

a) AT&T must be expressly excluded from providing international data/voice/facsimile demand service; and

b) Full and meaningful interconnection to the public telephone network must be guaranteed to the international record carriers. (WUI Comments, page 6).

2. AT&T has advocated a total monopoly of data/voice demand service for itself, with the international record carriers relegated forever to their existing Datel service, with voice utilization sharply restricted to coordination

and control only. WUI and other parties pointed out in their comments that any alleged competition between the international carriers and AT&T in providing data/voice demand service would be illusory and a grant of authority to both AT&T and the international carriers would in reality amount to a monopoly position for AT&T. However, AT&T has not even gone through the motions of advocating so-called competition. AT&T has demanded an outright total monopoly.

3. Knowing full well that the sharply restricted Datel service can in no way be considered competitive with data/voice demand service, AT&T has disingenuously proposed:

> "continued provision of the record carriers' Datel service, together with the availability of AT&T's MTS for overseas data transmission. ... AT&T, therefore, believes that, in the public interest, not only should the restrictions on the right of customers to use its MTS for overseas data transmission be removed but the record carriers should be authorized to continue to provide their Datel service." (AT&T Comments, page 10).

Thus, AT&T has disdained even the appearance of advocating competition of any kind by contending that only AT&T be allowed to provide data/voice demand service.

4. There can be no meaningful competition between AT&T's Long Lines Department and the international carriers, even if the latter are granted full interconnection rights to the telephone network. This is because the interests of the associated Bell companies and of Long Lines are intertwined and their actions are concerted. Even assuming without

and control only. WUI and other parties pointed out in their comments that any alleged competition between the international carriers and AT&T in providing data/voice demand service would be illusory and a grant of authority to both AT&T and the international carriers would in reality amount to a monopoly position for AT&T. However, AT&T has not even gone through the motions of advocating so-called competition. AT&T has demanded an outright total monopoly.

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> (AT&T Comments, page 10).

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4. There can be no meaningful competition between AT&T's Long Lines Department and the international carriers, even if the latter are granted full interconnection rights to the telephone network. This is because the interests of the associated Bell companies and of Long Lines are intertwined and their actions are concerted. Even assuming without

conceding that there might be regulatory consideration given to entry into the dial-up international data/voice field by both Long Lines and the international record carriers, total separation of Long Lines from AT&T and from the associated operating companies would be a prime minimum requirement.

5. Following AT&T's proposed exclusion of the international carriers from data/voice demand service, NYTelCo has refused to comply with WUI's January 29, 1973 request for interconnection for an unrestricted overseas Datel service (see exchange of correspondence attached as Exhibits A-1 and A-2). NYTelCo's refusal ignores the fact that unrestricted Datel service with Hawaii has been authorized and in effect for nearly a decade. Thus NYTelCo is denying WUI the right to compete on equal terms with the Bell System for the Hawaii data/voice demand market.

6. The combined effect of the AT&T and NYTelCo actions is that the Bell System is using its monopoly position to foreclose competition both for an existing service (data/voice demand service to Hawaii) and a projected service (worldwide data/voice demand service). As the owners of non-duplicable facilities, essential to the transmission of all telecommunications traffic, AT&T and its affiliates must make these facilities available to other carriers -- even when the result will be added

competition for AT&T. This principle has just been reaffirmed by the Supreme Court in United States v. Ottertail Power Company, __ U.S.___, 41 U.S.L.W. 4292 (Feb. 22, 1973).

7. This Commission, the New York State Public Service Commission and the Justice Department* should all be interested in these blatantly anti-competitive actions by AT&T and NYTelCo. Total separation of Long Lines from AT&T and the associated companies is necessary to insure that such predatory practices are not used in an attempt to extend the Bell System monopoly position into a new international service. A separation of Long Lines from the associated operating companies would free the latter to deal with outside entities in the non-discriminatory manner required by law.

8. At the very least, these actions vividly demonstrate the dangers in permitting AT&T to participate in international data/voice demand service. The telephone

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* In an October 25, 1972 speech to the International Conference on Computer Communication, Donald I. Baker, Director of Policy Planning, Anti-Trust Division, Department of Justice stated: "the general rule that has emerged is that a monopolist, unlike a normal business man, cannot refuse to deal in order to maintain or extend his commercial position. A related formulation of what is essentially the same principle is the rule that those controlling access to an essential facility must grant access on reasonable and non-discriminatory terms to all in the trade" (pages 4-5).

company's actions, coupled with the numerous public interest factors emphasized in the international carriers' initial comments, require that the international carriers alone be authorized to provide international data/voice demand service.

9. A reading of all of the initial comments in this proceeding discloses virtual unanimity that, seven years after first proposed by WUI, the data/demand voice services will fill a definite public need and should rapidly grow in importance.*

10. Matters of rates and charges, while difficult to forecast at this early stage, do not require immediate resolution and will be subject to continuing Commission supervision, as will all technical questions concerning cable versus satellite suitability for high speed data traffic. Use of the existing public switched telephone network will be enhanced by authorization of the new service. AT&T, its associated companies and the independent telephone companies will gain additional revenues from the domestic haul of the new interconnected overseas services. The competition among, and promotion of the service by, the record carriers will assure a rapid growth of the new market, both domestically and internationally.

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* Although some parties have estimated that, because of administrative and technical problems optimal service might not be available for several years, WUI is ready to provide the public with a useful form of dial-up data service, by end of 1973, assuming prompt Commission authorization.

11. In summary, exclusive authorization of the international record carriers to provide demand data/voice service, together with an active Commission role in establishment of suitable interconnection arrangements, are required to allow the new service to become a beneficial addition to the modern telecommunications industry.

12. In the following portion of its reply comments, WUI has addressed itself to the specific contentions of the parties in this proceeding.

AT&T

13. AT&T proposes that it be given the exclusive franchise to provide overseas data/voice demand service and that the record carriers be relegated to continued provision of the existing Datel service.

14. AT&T contends that it will be burdensome to "divert the data calls from the public switched network ... to the facilities of the appropriate record carrier for the overseas transmission ..."; that it will be difficult to detect unauthorized international data use over the telephone network; that the public switched network is already prepared for data utilization and that barring short period data use over the telephone network would be "artificial".

15. It should be noted that the "special arrangements" cited by AT&T as necessary to transfer data/voice calls from the domestic system to the international record

carriers' facilities would consist merely of appropriate interconnection and dialing code access. AT&T has been able to effect automatic interconnection, for both operations and accounting, with the domestic independent telephone companies and with the international record carriers for Datel service. All that the international record carriers require is similar treatment for the new service. Inconvenvenience to customers would exist only to the extent that AT&T chooses to maintain obstacles to convenient interconnection and simple dialing code systems. AT&T's refusal to effect fully automatic interconnection allowing the customer to dial data calls directly, and insistence that subscribers dial into the international record carriers at their operating centers, is the real cause of any inconvenience.

16. It is a familiar ploy of monopolist facility controllers to make these arguments alleging dire coordination problems. These arguments have long since been disproven by the beneficial efforts of the international record carriers in coordinating excellent end-to-end service. AT&T's vast monopoly network should be made reasonably available to other carriers requiring use of the system. Fair access to monopoly facilities is compelled by both public necessity and convenience as well as the antitrust laws. United States v. Ottertail Power Company, supra.

17. Contrary to the assertion of AT&T, maintenance of existing restrictions upon the interstate telephone carriers' provision of data/voice demand service is not impractical, or difficult to enforce. AT&T concedes that technically, "surveillance and detection equipment" could determine the nature of circuit usage.* Constant monitoring of all circuits would not be required if customers are made aware of the authorized means of international data/voice transmission and random misuse is effectively dealt with. The vigorous program of AT&T and its allied companies in policing use of customer-owned and maintained equipment, indicates that the telephone companies are fully capable of strictly regulating their lines when it serves their corporate policies.** They should be no less zealous in administering Commission policy.

18. AT&T pleads that its use of the overseas MTS network for demand data/voice service would be a "logical" extension of authority, and that barring this use would be "artificial". To the contrary, it is the international record carriers' Datel service which is laboring under an artificial restriction. With their specially conditioned data circuits, the international record carriers require only the elimination of the artificial restriction on voice to provide data/voice

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* Equipment presently available can perform this function of identifying voice and data signals.

** "Autodialer Takes Ma Bell to Court," Business Week p. 66, December 2, 1972; "Interconnection of Customer-Owned and Maintained Equipment," Public Utilities Fortnightly, p. 57, October 12, 1972; "Interconnection Notes." American Telephone and Telegraph Co. circular, June 15, 1971.

demand service just as they have long provided data/voice leased services. WUI believes that the logic expressed by the Commission in limiting the telephone company's overseas business to voice only, has not lost any vitality and should be reiterated in this Inquiry. Any other policy would vitiate the concern of the Commission expressed in the TAT-4 decision (37 F.C.C. 1151) of the engulfment by AT&T of the international market and of the erosion by AT&T of the ability of the international record carriers to continue to effectively provide their other services. The international record carriers are technically fully capable of providing an excellent data/voice demand service. Commission surveillance of interconnection arrangements with AT&T will insure elimination of the subscriber "inconvenience" conjectured by AT&T.

19. WUI believes that some equipment changes in the switched network would be required for efficient full-range data/voice service. The echo suppressors presently installed in foreign overseas trunk lines are in the main, in operation on a full time basis. A disabling capability would be required for sending data to allow full duplex operation and permit signals used for error detection to be returned to the data sender simultaneously with his data transmission. Exclusive authorization of the international record carriers to provide demand

data/voice service would only require that their dedicated trunk line facilities be so modified; otherwise, all foreign international trunks would have to be newly equipped, because of their possible random selection for transmission of high speed data traffic.

20. Because data transmission by satellite presents operational inefficiencies as compared with cable routing (see paragraphs 21 - 24, infra) the use of AT&T's satellite/cable "mixed bundles" will disadvantage data subscribers. Until cheap and effective equipment is available which will allow a network user to determine whether he is on satellite or cable, and thus be able to make necessary adjustments in his data terminals, the user will be at the whim of the AT&T system. If the international record carriers are authorized to provide the new service, dedicated circuits could more conveniently be arranged. In those cases when it is necessary to utilize satellite circuits, users would know whether cable or satellite routing is involved. Moreover, AT&T will have to take technical precautions to prevent data traffic from feeding into the TASI system. The continuous nature of data traffic does not provide the transmission pauses needed for efficient TASI operation.

COMSAT

21. Comsat's comments concede the inefficiency of satellite data transmission relative to cable.* This inefficiency is caused by the approximately six-fold increase in time required for a signal to traverse a satellite circuit, compared with a cable circuit. Therefore, pauses between the satellite transmission of data blocks are longer in the "start-stop" error control system, which system is in virtual universal use today. The "start-stop" system waits before sending a second data block (or repeating the first) until the first block has been received, analyzed, and the appropriate return signal is made. Thus, given the same likelihood of error in any particular data stream, whether sent by satellite or cable, longer waiting time between data blocks is required for error detection in satellite transmission, thereby increasing customers' on-line time and charge for service.

22. Comsat suggests that satellite data transmission efficiency can be enhanced by use of a new error control system, termed "go-back-2". However, implementation of this system will require satellite users to acquire additional hardware.** Devices must also be acquired to

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* Comsat Comments, pp. 2-3.

** It should be evident that change over from stop-start error detection to other methods required for satellites, will entail substantial costs. Comsat Comments, pp. 4-6.

detect whether a circuit in use is a satellite or cable circuit, in order to make appropriate adjustments in the length of the data blocks to be transmitted. The longer block length required in satellite use is not suitable for cables which may use (because of shorter transmission time) blocks of shorter length, so that the transmission time required to repeat affected blocks will be less. For this reason, use of AT&T's cable/satellite "mixed bundles" will provide inefficient service for the network user who will not know whether he is on cable or satellite.

23. Forward acting error control (FAEC) referred to on pp. 4-5 of Comsat's comments, essentially provides for continuous block repetition, similar to a repeated telegraph message. Although error rates are improved, transmission efficiency is substantially reduced because of the necessary redundancy. Where cost efficiency is important, FAEC is obviously not the answer.

24. The additional costs and inherent inefficiencies of satellite transmission must be carefully considered in order that unnecessary obstacles not be put in the path of potential users of the new data service. The scope of capital expenditures which will be required to adapt existing data terminals to satellite usage will be substantial. Certainly, until such time as the proposed specialized satellite error control equipment,

and other hardware needed to adapt data terminals to satellite use, are in wide production and actual commercial use, and their acquisition costs are lower, satellite circuits will not generally perform as effectively as cable circuits. Appropriate recognition must be given to this problem in this Inquiry.

25. In its Reply Comments, Comsat suggests that the new service's customers may, as their usage increases, find that a leased circuit is cheaper than short-time demand rates, thus providing an ultimate benefit to the international record carriers even if AT&T is permitted to provide the new services. Such a theory ignores the economic realities that:

> "general overseas service of this type by AT&T could adversely affect the demand for similar services of the record carriers, as well as for their telex and possibly their message telegraph services."*

26. Although the potential switch of existing service customers to the new service cannot now be accurately forecast, the likelihood of any net loss of the record carriers' revenue to AT&T, is a matter of genuine concern.

HAWAIIAN TELEPHONE COMPANY

27. While Hawaiian Telephone Company (Hawtel) is unable to quantify the nature and extent of its demand data/voice service now being offered, the company "is aware ... that a significant number of its subscribers have

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* Report of the Intra-governmental Committee on International Telecommunications, p. 25 (1966).

acquired facsimile equipment which may be accoustically coupled to its telephone facilities." Hawtel Comments, p. 2. The manner of Hawtel's awareness would be interesting to learn, especially if such knowledge was obtained through utilization of data/voice detection equipment.

28. Although Hawtel sees no "useful purpose" in interconnecting with carriers other than AT&T to provide the new service to non-mainland overseas points, it should be recalled that the existing Hawtel authorization was created as a unique exception to general Commission policy restricting provision of overseas record services to record carriers. Hawtel has already "benefited immensely" from this limited exception, 2 F.C.C. 2d 564, 577, and no adverse effect on existing revenues is alleged by Hawtel if the Commission in this proceeding determines not to deviate from its normal record services licensing policy.

29. Hawtel's statement that it has not interconnected its integrated message toll telephone network "with any United States carrier other than AT&T" serves only to underline the traditional and continuing barrier to progress posed by the restrictive practices of the telephone companies. Interestingly, Hawtel is willing to interconnect with its GTE parent for Hawaii/Mainland telephone service via satellite, notwithstanding the antitrust decree for divestment of Hawtel by GTE. Hawtel's

failure to interconnect with the international record carriers in Hawaii, together with AT&T's failure to interconnect on the Mainland, have contributed to the international carriers' inability successfully to provide the authorized overseas dataphone service to Hawaii. Until AT&T's recent decision, after years of refusal to interconnect its switched network with the record carriers' curtailed Datel service, AT&T had similarly never interconnected its public network with the international record carriers for message-type services.

WESTERN UNION TELEGRAPH COMPANY

30. The Western Union Telegraph Company (WUTelCo) agrees with the international record carriers that "there are substantial existing policy determinations which would prevent AT&T from providing the international dataphone service". WUTelCo Comments, p. 4. However, WUTelCo questions the need for the new service.

31. WUTelCo's undocumented suggestion that there is "nothing to indicate" an existing need for demand data/voice authority ignores the manifest trend and evident commercial and technical evolution of the telecommunications industry. Such an unaware, short-sighted view seems unusual from a company which loudly proclaims its familiarity with

modern record telecommunications needs and its capability of venturing into space technology with a domestic satellite system.

32. WUTelCo's opinion that the "international record carriers would be in no position to be ... retailer(s) of such services" is utterly devoid of reason. The international record carriers would competitively market and meet customer data/voice requirements in the same manner as other services which they now provide. The international record carriers would be responsible for the nature and quality of the international facilities portion of service, the standards of which can be kept high only by the international carriers' direct relationships with the overseas correspondent, the U.S. domestic carrier and the customer.

33. WUTelCo implies that the international carriers may face "conflicts" in marketing the data/voice service since there may be diversion of business from existing services. To some extent, of course, each new service diverts customers from the traditional services. However, the international record communications industry has built its success upon presenting the public with innovative service advances as alternatives to existing services. Authorizing the international carriers to provide data/voice demand service no more requires a "reevaluation" of their retailer role than has their decade-long role in alternate voice-data services.

UNITED STATES INDEPENDENT TELEPHONE ASSOCIATION

34. The independent telephone companies appear concerned that the Commission may prohibit use of the public switched telephone network for demand voice/data service. No party to this proceeding advocates such a position; indeed the new service would be virtually impossible without the network. The international record carriers' promotion of this service would lead to increased revenues for the independent telephone companies, given the more aggressive marketing of the competitive record carrier industry. The only real threat to efficient use of the existing switched network is the hindrance to meaningful and effective interconnection posed by AT&T and its operating affiliates.

CONCLUSION

In order to maintain the existing and future telecommunications needs of American industry, and to prevent further extension of AT&T monopoly power into still another market, the international record carriers should be franchised to provide the demand data/voice service which is the subject of this Inquiry. The Commission should also specifically require interconnection via AT&T and its

operating affiliates, upon reasonable terms and conditions. Commission supervised separation of Long Lines from AT&T and the associated operating companies is a prime minimum condition precedent to any further extension of AT&T's role in international telecommunications.

Respectfully submitted,

WESTERN UNION INTERNATIONAL, INC.

By: Ernest Brod

Howard L. Stevens
Its Attorneys

One WUI Plaza
New York, New York 10004

March 28, 1973

Exhibit A-1

January 29, 1973

G. W. Bates, Esquire
General Counsel
New York Telephone Company
120 West Street
New York, New York

Dear Mr. Bates:

Western Union International, Inc. (WUI), a common carrier whose principal operations are located in New York City, presently provides an overseas "datel" service which furnishes to customers a data operation -- with voice coordination of the data transmission. WUI is seeking authority to expand this service by removing the inhibiting restriction of voice purely as coordination. WUI is already authorized to provide such an unrestricted service to Hawaii.

However, one of the deterrents to expanding this service has been a lack of automatic interconnection with the public telephone switched network.

We should therefore like to obtain from you your agreement to permit telephone subscribers located within the State of New York to automatically interconnect with the overseas facilities of WUI in order that WUI will be in a position to furnish the public within the State of New York an international "dataphone" type of service.

A prompt reply is requested in light of the pendency of proceedings before the Federal Communications Commission which will require WUI to address itself to this question within the next few weeks.

BEST COPY AVAILABLE

Copies of this letter have been forwarded to the Federal Communications Commission, the Office of Telecommunications Policy and the New York Public Service Commission.

Very truly yours,

E. Brod

cc: Mr. Bernard Strassburg, Chief, Common Carrier Brahch, FCC
Mr. Ben F. Waple, Secretary, FCC
Mr. Clay T. Whitehead, Director, OTP
Mr. Joseph C. Swidler, Chairman, PSC
Mr. Samuel R. Madison, Secretary, PSC

bcc: EAG
REC
JGM
RPR
TEN
GVG
PHS
HLS

Exhibit A-2

NEW YORK TELEPHONE COMPANY

LEGAL DEPARTMENT

140 WEST STREET

NEW YORK 7, N. Y.

AREA CODE 212
394-3400

February 23, 1973

Mr. Ernest Brod
Vice President and Counsel
Western Union International, Inc.
25 Broadway
New York, N. Y. 10004

Dear Mr. Brod:

Your letter of January 29th in which you request automatic interconnect for overseas "datel" service without voice restriction and your letter of February 2nd in which you request the Company to bill our subscribers directly for WUI overseas cablegrams have been referred to me.

After reviewing your requests, it is our conclusion that in view of the pending F.C.C. dockets Nos. 19660 and 19558, a commitment on the part of this Company at this time would be premature. Upon resolution of the two F.C.C. dockets mentioned above, we will be happy to discuss the matter further.

Very truly yours,

Burton K. Katkin
General Attorney

BEST COPY AVAILABLE

CERTIFICATE OF SERVICE

I, Mary Chin, hereby certify that I have this 28th day of March, 1973, mailed by United States Mail, postage prepaid, a copy of the foregoing Reply Comments to:

Charles F. Martin, Esq.
American Telephone & Telegraph Company
Long Lines Department
32 Avenue of the Americas
New York, New York 10013

David C. Acheson, Esq.
Communications Satellite Corporation
950 L'Enfant Plaza, S. W.
Washington, D. C. 20024

Mr. J. A. Berenger
French Cable Company
25 Broad Street
New York, New York 10004

Thomas J. O'Reilly, Esq.
Chadbourne, Parke, Whiteside & Wolff
1150 - 17th Street, N.W. (Suite 1108)
Washington, D. C. 20036
(Counsel for Hawaiian Telephone Company & United States Independent Telephone Association)

Puerto Rico Telephone Company
Virgin Islands Telephone Company
c/o Edwin A.Kilburn, Esq.
International Telephone & Telegraph Corp.
320 Park Avenue
New York, New York

Andrew R. Sarisky, Esq.
RCA Alaska Communications, Inc.
629 E. Street
Anchorage, Alaska 99501 (Airmail)

Francis J. DeRosa, Esq.
RCA Global Communications, Inc.
60 Broad Street
New York, New York 10004

BEST COPY AVAILABLE

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The Western Union Telegraph Company
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Howard A. White, Esq.
ITT World Communications Inc.
67 Broad Street
New York, New York 10004

Mary Chin

January 24, 1973

To: Messrs. Dunleavy
Westfall
Aibel
Bohon
Gen. McNitt
Tower
Podmolik
Reynolds
Wells
Canestrari
Cassidy
Gancie
Ganschow
Orso
Edgar
G. White
Murphy
Bush
Kilburn
Watt
Slater
Ryan
Kirkwood
Barbely
Hedborg
Varner
McKinney
Intartaglia
Duarte
Abbott

Re: Dataphone Service

Please find attached Western Union International Inc.'s Comments to the FCC's Notice of Inquiry in FCC Docket No. 19558.

JOSEPH J. JACOBS

Western Union International, Inc.
ONE WUI PLAZA · New York, N.Y. 10004

ROBERT E. CONN
Executive Vice President

Telephone (212) 363-6404

October 17, 1975

Honorable Richard E. Wiley
Chairman
Federal Communications Commission
Washington, D.C. 20554

Re: International Datel/Dataphone
Dial-up Service Inquiry
Docket No. 19558

Dear Mr. Wiley:

The Commission's calendar for October indicates that the Commission is scheduled to review the above-referenced 1972 inquiry to determine, among other issues, whether American Telephone & Telegraph Company (AT&T) should be authorized to provide a data/voice dial-up (demand) service to foreign overseas points. The ultimate resolution of that issue involves the same public interest considerations that formed the basis of the Commission's policy to preclude AT&T from entering the market for international record communications services. TAT-4 Decision 37 F.C.C. 1151 (1964). That policy was premised on the Commission's concern that AT&T's entry into the international record field would jeopardize the continuation of a viable competitive international record carrier industry. The wisdom of that policy has been demonstrated by over 10 years of competitive progress in data/voice private line service, with service provided at ever higher technical standards and at declining rates.*

This inquiry was instituted more than 3 years ago on July 26, 1972. 36 F.C.C. 2d 605. The purpose of this letter is to bring to the Commission's attention, certain developments that have occurred subsequent to early 1973 when comments were last filed in this inquiry--developments which further substantiate WUI's position that AT&T should not be granted the authorization it seeks to enter the overseas market for data/voice communications services.

*All cognizant Government Agencies, including this Commission, OTP, Justice, State and D.O.D., reaffirmed this TAT-4 policy and urged that it be applied to overseas demand data/voice service. Report of the Intragovernmental Committee on International Telecommunications, April 29, 1966, pp. 24-25 & 28.

Since the end of the pleading stage in this docket 2-1/2 years ago, WUI has made repeated efforts to establish arrangements for the appropriate interconnection of its own authorized datel facilities into the domestic telephone network of the Bell System. Such carrier-to-carrier interconnection would have enabled WUI to demonstrate that existing datel service, when so interconnected, can effectively meet present and future requirements for switched international data/voice demand service.* It would also have demonstrated that there is no need or justification for the Commission to authorize AT&T to provide such service and to thereby vitiate its established policy to prevent AT&T from permeating every growing communications market to the exclusion of effective competition.

However, despite WUI's repeated efforts to obtain adequate interconnection with the domestic telephone network, AT&T and its Bell System "partners" have engaged in concerted action to deny such arrangements to WUI. Moreover, even non-Bell (the so-called "independents") operating companies, although cooperative when first approached by WUI, have denied us interconnection after reviewing the matter. The refusal of Bell and the "independents" to provide adequate interconnection with WUI's authorized datel facilities is a flagrant and indefensible abuse of monopoly power. Otter-Tail Power Co. v. United States, 410 U.S. 366 (1973). AT&T should not be accorded preferential status by virtue of its affiliation with other operating companies of the Bell System. Accordingly, the Commission should take whatever steps are necessary and appropriate to assure that the Bell System operating companies provide the international record carriers interconnection into the domestic telephone network under terms and conditions no less favorable than those available to AT&T's Long Lines Department.

*Along with meaningful interconnection, WUI has repeatedly urged the Commission to modify existing record carrier authorizations to permit unrestricted voice communications (in lieu of the undue restriction of voice for coordination of data only) combined with data and facsimile transmissions in order to transform datel into the international data/voice demand service which is the subject of Docket No. 19558. WUI's regulatory endeavors in this regard since 1965 are recounted in our filings in this Docket.

It was precisely such anti-competitive and obstructionist behavior by the Bell System that was properly condemned by the Commission in Docket Nos. 19896 and 20099 regarding the domestic specialized carrier sector. In addition, the Commission took steps in its Domestic Satellite Inquiry (Docket No. 16495) to prevent AT&T from thwarting the development of a competitive marketplace for commercial private line services by restricting AT&T's use of its satellite system to its monopoly service for a minimum period of three years. WUI submits that similar forceful Commission action is warranted herein if the overseas data/voice demand marketplace is to be spared from becoming another Bell preserve.*

In addition to AT&T's refusal to provide adequate interconnection for datel, the very real threat posed by AT&T to competition in the international data communications field has been amply demonstrated during the past two years by AT&T-influenced activities in certain study groups of C.C.I.T.T. looking toward development of a future international integrated digital data/voice switched network predicated upon technical and operational parameters compatible with domestic Bell System design, to the practical exclusion of potential competition from the international record carriers.

It is WUI's position that it should be afforded a reasonable opportunity to demonstrate fully its capability to serve public requirements for overseas voice/data demand service;** that until now WUI has been denied this opportunity

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*Recent institution of massive anti-trust litigation by the U.S. Department of Justice directed against the Bell System cites instances of abuse of monopoly power as well as self-serving and anti-competitive practices not dissimilar to those cited hereinabove with respect to WUI's unsuccessful efforts to interconnect with the domestic telephone network.

**WUI would propose to provide efficient, economical overseas data/voice demand service by means of dedicated bundles of uniformly conditioned circuits such as expressly reserved for that purpose by a joint British Post Office/WUI resolution adopted at the Transatlantic Cable Conference concerning TAT-6 and CANTAT-II held at Eastbourne, England.

by the arbitrary refusal of AT&T to provide the required interconnection for datel access to the domestic telephone network; and that the Commission should take no action to permit AT&T entry into the foreign overseas voice/data demand market until it has been demonstrated that such entry is necessary in order to satisfy user requirements that cannot be met by the international record carriers.

To this end, WUI requests the Commission to institute appropriate discussions, under Commission aegis, among all interested carriers in order to effect the necessary interconnection and access arrangements between the domestic telephone network and the international record carriers. Such immediate action, coupled with liberalization of the usage of oral dialogue in WUI's existing datel service as noted above, should be implemented on no less than a three-year experimental basis, in order to demonstrate that the international data/voice demand market can be fully satisfied by existing international record carriers without the inevitable competitive trauma that would be caused by the entry of AT&T into this marketplace.

Very truly yours,

Robert E. Conn

cc:All Commissioners

Chief, Common Carrier Bureau

American Telephone & Telegraph Co.
ITT World Communications Inc.
RCA Global Communications, Inc.
TRT Telecommunications Corp.
U.S. Department of Justice
Anti-Trust Division

ITT World Communications Inc.

George F. Knapp
President

67 Broad Street
New York, N.Y. 10004
Telephone (212) 797-8047

November 13, 1975

The Honorable Richard E. Wiley
Chairman
Federal Communications Commission
1919 M Street, N. W.
Washington, D. C. 20554

Dear Chairman Wiley:

We understand that the international dataphone inquiry (FCC Docket No. 19558) will soon be before the Commission for consideration. We trust that you and the other Commissioners will seriously consider our formal comments wherein we stressed the potentially crippling effects on the international record carriers (IRC's) of any policy which would allow AT&T to "compete" with the IRC's in providing a record service over which AT&T retains a "bottleneck monopoly" on the U. S. Mainland. Nonetheless, due to the lapse of time since formal submissions were made, which is over two years ago, ITT Worldcom believes that it would be useful if more recent developments which bear on this matter were brought to your attention and be considered in your deliberations.

Thanks to your sense of international cooperation, new avenues of consultation on international facilities planning are being explored. Unfortunately, those consultations do not specifically include international dataphone services or the diversionary effects on telex and facilities requirements which would result from the introduction of such services. In short, notwithstanding the request for extensive and detailed responses to the Commission's Third Notice of Inquiry regarding overseas facilities (FCC Docket No. 18875), no direct attention has been given to the consequences of alternative dataphone policies being considered in Docket No. 19558. We believe very strongly that the two matters are interrelated and suggest that your further investigations in Docket

No. 18875 must necessarily include discussions as to the dataphone issue.

In this connection, you will also be interested in noting that one of our foreign partners, Radio Suisse Ltd., after recently stating that the international data transmissions should be the responsibility of international record carriers, said that "Any unilateral action by the USA in this field is contrary to the intrinsic internationalism of telecommunications. The very least we should do is plan the future in common." Please be assured that, based also on recent discussions, others of our foreign partners have orally expressed similar concerns.

Finally, assuming that the IRC's are eventually permitted to meaningfully participate in the provision of international data transmission services, we believe that important technical and operational interconnection arrangements between AT&T and the IRC's must be developed. These arrangements would also affect the interests of our foreign partners and essential consultations with them are equally vital.

In the light of the foregoing, I respectfully urge you to establish procedures which would permit full development of the current facts relevant to these and other pertinent considerations before any definitive action is taken by the Commission specifically in Docket No. 19558. Please be assured that ITT Worldcom will be most anxious and pleased to assist in such efforts.

Respectfully yours,

George F. Knapp

11/14 Add't distribution by H. White to:
Messrs. Canestrari, Slater, Hedborg, McKinney

FCC-Messrs. Goldman, Permut
WUI - Mr. Conn
RCA- Mr. Murphy
ATT- Mr. Nichols.
TRT- Mr. Lubetsky

cc: The Honorable Robert E. Lee
The Honorable Charlotte T. Reid
The Honorable Benjamin L. Hooks
The Honorable James H. Quello
The Honorable Abbott Washburn
The Honorable Glen O. Robinson
Mr. Walter R. Hinchman

T. W. Scandlyn
Assistant Vice President

AT&T
American Telephone and
Telegraph Company
195 Broadway
New York, N. Y. 10007
Phone (212) 393-3342

November 18, 1975

Honorable Richard E. Wiley
Chairman
Federal Communications Commission
Washington, D. C. 20554

Re: Overseas Dataphone Service
Inquiry, Docket No. 19558

Dear Chairman Wiley:

By letter dated October 17, 1975, Western Union International, Inc. (WUI) wrote you asking that the Commission defer action in the Overseas Dataphone Service Inquiry (Docket No. 19558). WUI's letter contains misstatements of fact and misleading argument. This letter responds to WUI's charges.

WUI - having surmised that the Commission is about to issue a decision in Docket No. 19558 which may not serve its private interests - asks the Commission to defer a decision in the proceeding for another 3 years. WUI seeks thereby to exclude AT&T from providing overseas Dataphone® service, allegedly to give WUI and the other international record carriers (IRCs) the opportunity to show that their DATEL services would adequately meet customer demand for overseas voice/data message services. In WUI's view, AT&T should be permitted to provide overseas Dataphone service only if WUI's 3-year effort shows that "user requirements cannot be met by the international record carriers".

WUI's request is extraordinary in several respects. First, it comes over 2-1/2 years after the time for filing comments in the Overseas Dataphone Service Inquiry. We are unaware of any provision of the Act or of the Commission's Rules that authorizes WUI's belated effort to influence the disposition of this proceeding. Second, if WUI desired a 3-year experimental period to prove the value of DATEL service, it could have requested

a trial period in timely fashion in its formal comments. The Commission should not tolerate WUI's transparent effort to avert what it fears will be an unfavorable decision in this proceeding by a suggestion which - even assuming it were meritorious - could have been made in the time allotted by the Commission's procedures. Finally, WUI has had ample opportunity to demonstrate the advantages of DATEL service in the 3-year interim period since Docket No. 19558 was instituted. So far as we know, it has made no significant effort to market its DATEL service and offers no evidence to demonstrate that DATEL services have eliminated the need for an overseas Dataphone service. The conclusion is unavoidable that WUI's arguments are interposed for delay.

WUI seeks to excuse its failure to act during this long interim period by alleging that the Bell System has refused to provide adequate interconnection for WUI's DATEL service with domestic telephone facilities. Certainly, one might ask - if this were true, why did not WUI complain to the Commission earlier. The facts are that, on August 31, 1972, AT&T wrote to the international record carriers expressly agreeing that, upon request, it would make "direct electrical connection at [IRC] premises of Bell System local loops used to provide Message Telecommunications [MTS] and Wide Area Telecommunications (WATS) Services with the facilities used by [the IRCs] to provide Overseas DATEL service".* AT&T made similar statements in its comments in the Overseas Dataphone Service Inquiry.**

Apparently unknown to WUI's management, WUI has requested and the Bell Companies have supplied WUI MTS connections for its DATEL service in conformity with our August 31, 1972 letter. We have supplied similar connections to the other IRCs. We have also furnished at least one IRC WATS connections for DATEL service but, so far as we know, WUI has never requested WATS connections. In light of these facts, it is apparent that WUI's allegations are unfounded and grossly misleading.

In evaluating WUI's request for further delay, the Commission should be mindful that the United States remains virtually alone among the countries of the world in denying telephone users the right to use their telephone

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* August 31, 1972 letter of Mr. R. B. Nichols to Mr. E. D. Becken (RCA Global Communications, Inc.) with a copy to Mr. E. A. Gallagher (WUI).

** See e.g. AT&T Reply Comments dated March 27, 1973, pages 9-10.

service for overseas Dataphone.* Today, we permit Dataphone use on the telephone system within the 50 states - including Alaska and Hawaii. We provide Dataphone service to Canada. Our customers have asked for the right to use MTS for overseas Dataphone just as they now use it for domestic Dataphone.** Foreign governments and our overseas correspondents have urged the removal of artificial restrictions against overseas Dataphone use. CCITT deliberations - rather than being an occasion for AT&T to press its views on overseas Dataphone - have afforded our overseas correspondents a forum in which to encourage us to remove tariff restrictions on Dataphone service. Since overseas Dataphone would be a permissive use of basic message telephone service, the present restriction excludes all customers from this advantageous use of the telephone system. Thus, the real issue which WUI raises is, whether the public interest would be served by continuing to deny telephone users the opportunity to make overseas Dataphone calls - in order to protect WUI.

WUI's letter stems from a disturbing premise. WUI makes the argument - heard with growing frequency in Commission proceedings - that the Bell System should be excluded from any markets someone else wishes to serve. WUI's argument is that the only way to have competition is to exclude from the market place the most experienced supplier of telecommunications services. We submit that WUI calls for a protected cartelization of the market - not free and open competition.

The communications public has awaited a decision in this proceeding for some 2-1/2 years. We believe the Commission has all the evidence it needs to decide the issues in this proceeding and that it should do so promptly.

Very truly yours,

---

* Mexico is the only other country we know of which places similar restrictions on its telephone system.

** It was a customer request which led the Commission to institute this inquiry. See Overseas Dataphone Service Inquiry, 36 F.C.C. 2d 605 (1972) para. 1.

cc: Commissioner Benjamin L. Hooks
Commissioner Abbott M. Washburn
Commissioner Charlotte T. Reid
Commissioner James H. Quello
Commissioner Glen O. Robinson
Commissioner Robert E. Lee

Mr. Walter R. Hinchman, Chief, Common Carrier Bureau

ITT World Communications Inc.
RCA Global Communications, Inc.
TRT Telecommunications Corp.
Western Union International, Inc.
U.S. Department of Justice
Anti-Trust Division

RCA Global Communications Inc | 60 Broad Street | New York, NY 10004 | Telephone (212) 363-2070

Mr. Vincent J. Mullins, Secretary
Federal Communications Commission
Washington, D. C. 20554

RCA

Re: Docket No. 19558--Inquiry into policy to be followed in future authorization of overseas switched voice/data services

Francis J DeRosa
President and
General Counsel

Dear Mr. Mullins: November 25, 1975

Following the Commission's indication on its calendar that it would shortly consider the issues involved in the international Dataphone Inquiry, Docket No. 19558, Western Union International, Inc., ITT World Communications Inc. and the American Telephone and Telegraph Company wrote to the Commission concerning that proceeding. RCA Global Communications, Inc. (RCA Globcom) has reviewed those letters and believes that two significant public interest considerations are forcefully brought to light by the parties.

The first matter noted by all of the above carriers is that nearly three years have elapsed since the filing of the last comments in the Dataphone Inquiry proceeding. Inasmuch as the Commission's decision on this matter will to a significant degree shape the future institutions and methods for handling international data communications, we believe that the public interest dictates that any decision should not be based on a three-year old record which in this field, where technology and requirements develop quickly, may have become stale.

Secondly, and of equal importance, is that the Commission has issued a further Notice of Inquiry in Docket No. 18875 which is specifically designed to deal with the future institutions and methods of handling international communications. In its prior Notice of Inquiry adopted on February 12, 1975 the Commission stated that "it is therefore imperative that the Commission develop, adopt and review its policies regarding facilities required to serve U.S. needs in light of the international

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nature of such facilities and do so after full consideration of all factors involved and in consultation with the responsible entities in other countries."

In keeping with these concerns, the other voice/record carriers have brought to the Commission's attention that at least one of the international record carriers' foreign correspondents does not believe that it has had the opportunity to make its views on this important matter known to the Commission and that accordingly it would consider unilateral U.S. action to be "contrary to the intrinsic internationalism of telecommunications." RCA Globcom has receive similar comments from its foreign correspondents, all indicating the expectation that in line with its announced policy the Commission would not reach a decision on the Dataphone matter until the concerns of all entities are heard and considered.

In view of the long period since the original comments were filed and the concern for international comity, RCA Globcom believes that the public interest would be served by deferring any decision in this Inquiry until after consultation with major overseas administrations and operating companies, and the consideration of current data generated thereby. We also believe relevant data can best be developed by a joint study effort under the auspices of the U.S. carriers and the Commission on this side and organizations such as CEPT in Europe. Joint action of this type will assure a much sounder ultimate Commission decision which would reflect the plans and proposals of our major correspondents and would also constitute solid evidence that the Commission is implementing its expressed intention to consider and take into account inputs from the major telecommunications administrations of the world in matters of mutual concern.* We propose that these objectives

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*The undertaking of such joint review need not and should not impede developmental programs to further the art of data communications, where such programs have been agreed upon between a U.S. carrier and one or more foreign carriers. Indeed, the input obtained from these pilots programs will aid in the decision-making process.

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be accomplish by the incorporation of the following program into the recently reopened proceeding in Docket No. 18875:

a. Prompt communication of our proposal to CEPT.

b. Establishment of a joint study group.

c. Joint formulation of an agenda of items to be reviewed.

d. Adoption of a tight but reasonable time-table for the development of a report.

e. Preparation of a Commission decision which takes into account the findings contained in the report.

Respectfully submitted,

Francis J. Doyle

cc: Chairman Richard E. Wiley
Commissioner Robert E. Lee
Commissioner Benjamin L. Hooks
Commissioner Abbott Washburn
Commissioner Charlotte T. Reid
Commissioner James H. Quello
Commissioner Glen O. Robinson

Mr. Walter R. Hinchman
Chief, Common Carrier Bureau

To All Parties

Western Union International, Inc.
ONE WUI PLAZA · New York, N.Y. 10004

ROBERT L. CONN
Executive Vice President

Telephone: (212) 363-6404

December 4, 1975

Honorable Richard E. Wiley
Chairman
Federal Communications Commission
Washington, D.C. 20554

RE: International Datel/Dataphone
Dial-up Service Inquiry
Docket No. 19558

Dear Chairman Wiley:

By our letter of October 17, 1975, Western Union International, Inc. (WUI) brought to your attention certain relevant anticompetitive conduct by the American Telephone & Telegraph Company (A.T.&T.) and its associated Bell System companies subsequent to the institution of the referenced inquiry of July 26, 1972, concerning data/voice dial-up (demand) service to foreign overseas points.

In its reply letter of November 18, 1975, addressed to you, A.T.&T.: (a) denied such anticompetitive conduct; (b) accused WUI of evincing a long-delayed and transparent interest in providing this demand service only because of a possible imminent adverse Commission decision; and (c) sought to derogate WUI's position by enshrouding it in the familiar rhetoric of "protectionism" and "market cartelization" which is currently in vogue among Bell System advocates.

It is essential to the Commission's deliberations in Docket No. 19558 that all relevant facts are exposed for its consideration, particularly those that have unfolded since the end of this Docket's pleading stage -- 2-1/2 years ago. WUI will briefly document a decade of relevant anticompetitive conduct by A.T.&T. designed to delay this overseas data/voice demand service until A.T.&T. has positioned itself into a strategically dominant position.

On June 15, 1965, in an application to the Commission, WUI first called for interconnection of its overseas datel service with A.T.&T.'s domestic dataphone service (F.C.C. File No. T-C-1896). In its reply comments to the Commission of June 21, 1965, A.T.&T. contended that the interconnection issue was not yet ripe for Commission decision and professed a lack of understanding of the type of interconnection being sought by WUI. This was followed by a series of correspondence between WUI and A.T.&T. consisting of four letters, copies of which are attached hereto for your convenience as Attachments A-1, A-2, B and C. WUI's letter of November 15, 1965 (Attachment A-2) adverted to the then existing antiquated method of "interconnection" whereby WUI was forced to manually intercept calls originating from domestic dataphone callers, and relay incoming perforated tape to an outgoing overseas circuit; and requested "direct" interconnection. By its reply letter of January 6, 1966 (Attachment B), A.T.&T. stated that such "direct connection...would be a radical departure from the existing pattern of international communications and one which we are not persuaded is required by the public interest at this time." (Emphasis Added).

During subsequent years, WUI reiterated its position before the Commission including, for example, its statements supporting institution of overseas data/voice demand service in Docket No. 18875 (Transcript of Informal Conference On Transatlantic Communications, June 17, 1971, pp. 31-34). Also, in its application of July 14, 1972 for authority to provide overseas data/voice demand service, WUI again called for reasonable and non-discriminatory interconnection by A.T.&T.

On July 26, 1972, The Commission adopted its Notice of Inquiry in this Docket (36 F.C.C. 2d 605). It is not coincidental that only one month later, by letter of August 31, 1972, A.T.&T. offered to provide WUI with a "direct electrical connection" between its domestic network and WUI's overseas datel service (Attachment C). Such a gesture provided A.T.&T. with the facade of a justification for its comments of January 11, 1973 in Docket No. 19558 that it should be permitted to enter into overseas dataphone service in exchange for providing interconnection privileges to WUI. While this type of interconnection might have temporarily sufficed

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in 1965 when first requested by WUI, by 1972-3 it was just as antiquated as the above-described 1965 vintage.

This so-called "direct electrical connection" merely joined WUI's facilities to the domestic telephone network via two-wire data access arrangements similar to that obtainable by any individual telephone subscriber. Such interconnection is obviously not acceptable for a common carrier and is grossly inferior to the type of interconnection between the Bell System associated companies and the independent telephone companies on the one hand, and A.T.&T.'s Long Lines Department, on the other hand.

During the last three years, covering the period subsequent to the institution of Docket No. 19558, WUI has been continuously rebuffed by the Bell System and its affiliated and nonaffiliated operating company partners, in WUI's quest for four-wire trunk interconnection into a tandem telephone switching exchange. This type of interconnection is essential to enable WUI to provide high quality automatic service, improve customer dial access, and capture necessary customer billing information. Pursuant to this objective, WUI engaged in a series of correspondence with the New York Telephone Company, which is attached hereto for your convenience as Attachments D, E, and F. On January 29, 1973, WUI wrote to New York Telephone indicating that a lack of automatic interconnection was deterring the development of datel service and requesting:

> "...[Y]our agreement to permit telephone subscribers located within the State of New York to automatically interconnect with the overseas facilities of WUI in order that WUI will be in a position to furnish the public within the State of New York an international 'dataphone' type of service." (Attachment D).

By reply letter of February 23, 1973, New York Telephone concluded that WUI's request was "premature" because of the pending F.C.C. Docket Nos. 19558 and 19660 (Attachment E). WUI responded on February 27, 1973, in part, as follows:

> "It is not within the prerogative of your company to avoid responding substantively to WUI's reasonable requests on the grounds of the pendency of certain proceedings before the Federal Communications Commission. That Commission, not New York Telephone Company, will determine the applicability of its proceedings, policies and rules to the overseas services offered by WUI." (Attachment F)

Again, by letter of June 4, 1974, WUI requested of A.T.&T. a carrier-to-carrier-type, rather than an individual subscriber-type, interconnection for its datel service with A.T.&T.'s "message network in the same manner as any class 5 central office of an independent telephone company might connect to an A.T.&T. toll office." (Attachment G). Once again WUI's request was rebuffed. In its reply letter of June 27, 1974, A.T.&T. admitted that it was treating WUI merely "as a customer" rather than as a connecting carrier; and sought to distinguish WUI from independent telephone companies on the grounds that the latter "are partners in a joint undertaking", whereas WUI is not. (Attachment H).

Finally, WUI has also been rebuffed by the so-called independent "partners" of the Bell System, even though they appeared cooperative when first approached by WUI for a carrier-to-carrier interconnection agreement for overseas datel service. For example, by letter of December 12, 1974, General Telephone of Florida declined our interconnection request and referred us back to the New York Telephone Company (Attachment I).

The foregoing summary convincingly rebuts A.T.&T.'s current allegations in its letter of November 18, 1975 to you, that: (a) A.T.&T. has not conducted itself in an anti-competitive fashion; (b) WUI is a late entrant into the matter of overseas data/voice demand service; and (c) WUI is guilty of, in Bell's current vocabulary, "protectionism" and "market cartelization".

The foregoing history demonstrates the accuracy of WUI's prediction of August 27, 1965:

> "Based on past history, AT&T would withhold complete and unrestricted interconnection of its domestic services with international services of other carriers, until AT&T was ready to exploit those same international services with offerings of its own. Then to palliate the adverse consequences of the inevitable dominion by it over these international services, AT&T would offer interconnection to the other carriers." (WUI responsive pleading concerning its 1965 application for interconnected datel/dataphone service, File Nos. P-C-6019, T-C-1896).

In view of a decade of anticompetitive behavior by A.T.&T. through its control of the domestic message telephone network, A.T.&T. must not be permitted to obtain any benefits in Docket No. 19558 from its misbehavior either through an authorization exclusively to provide dataphone service to foreign overseas points or to provide the service in competition with WUI and the other international record carriers. Consequently, WUI reaffirms its position as set forth in its letter of October 17, 1975 that WUI's proposed interconnected datel overseas service provides a viable alternative to unleashing A.T.&T. into an overwhelming position in still another telecommunications market.

Very truly yours,

Robert E. Conn

Attachments

cc: All Commissioners
Chief, Common Carrier Bureau

American Telephone & Telegraph Co.
ITT World Communications Inc.
RCA Global Communications, Inc.
TRT Telecommunications Corp.
U.S. Department of Justice
Anti-Trust Division

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WESTERN UNION INTERNATIONAL, INC.

August 27, 1965

Mr. Harold M. Botkin
Assistant Vice President
International Services
American Telephone & Telegraph Co.
32 Avenue of the Americas
New York, New York 10013

Dear Mr. Botkin:

Enclosed is a copy of a "Response" filed today with the Federal Communications Commission in support of WUI's position that it should be authorized to provide via satellite channels alternate data-voice message services, with complete and unrestricted interconnection with the domestic telephone network.

AT&T in its "Reply" of June 21, 1965, indicated that it "is not clear" from WUI's prior filing with the Commission "just what type of interconnection arrangement WUI proposes." It is hoped that the enclosed "Response" clarifies this matter.

AT&T is respectfully requested to agree to interconnect, on equitable and nondiscriminatory terms, its domestic telephone facilities with the facilities of WUI in order that the benefits of WUI's present (datel and datatelex) and proposed international alternate data-voice message services might be extended to the greatest number of subscribers in the United States and abroad.

Very truly yours,

Robert E. Conn (signed)
Vice President and Counsel

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ATTACHMENT A-2

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WESTERN UNION INTERNATIONAL, INC.

November 15, 1965

Mr. Harold M. Botkin
Assistant Vice President
International Services
Long Lines Department
American Telephone and Telegraph Co.
32 Avenue of the Americas
New York, New York 10013

Dear Mr. Botkin:

Western Union International offers its overseas data transmission services to the public throughout the continental United States. Subscribers of the American Telephone and Telegraph Company may transmit their data communications via WUI pursuant to its Overseas Datel Service Tariff FCC No. 11 and its Overseas Broadband Exchange Service Tariff No. 6.

In connection with its data transmission services, WUI is endeavoring to avoid any unnecessary costs resulting from redundant central office equipment and at the same time avoid any artificial barriers which might be interposed to the detriment of the service. The public has its choice of computers and business machines supplied by many different manufacturers. No useful purpose would be served by the installation at WUI's central office of the many varieties of machines available to the public in order to intercept data communications from subscribers intended for their overseas correspondents. The imposition of any such artificial and unnecessary barriers between data correspondents would only serve to increase the cost of service and detract from its efficiency.

It is clear that subscribers to the Broadband Exchange Service of The Western Union Telegraph Company may transmit their overseas data communications directly to their overseas correspondents via the international record carriers.

These carriers are not required to invest in costly redundant business machines for the unnecessary function of intercepting these data communications for retransmission abroad.

Please confirm by reply letter that the Telephone Company will permit direct overseas data calls via Telephone Company facilities in conjunction with WUI's existing data transmission services and that no requirements will be imposed upon WUI to intercept and terminate these calls as a condition precedent to the transmission abroad via WUI's facilities.

There remains the matter of the modems necessary to provide data transmission service between Telephone Company subscribers in the United States and their subscribers abroad. Please advise whether the Telephone Company intends:

(a) To provide CCITT-recommended modems to its subscribers who wish to avail themselves of WUI's overseas data services; or

(b) To modify one or more of its modems to conform with CCITT recommendations as applicable for 600 and 1200 baud operation; or

(c) To permit WUI to furnish CCITT-recommended modems to Telephone Company subscribers who wish to avail themselves of WUI's overseas data services. In the event that the Telephone Company intends to follow the alternative mentioned in this paragraph, please advise whether the Telephone Company is willing to provide maintenance service for WUI-supplied modems on a contractual basis with WUI.

Your prompt cooperation in this matter will be greatly appreciated.

Yours very truly,

P.R. Easterlin (signed)
Vice President

ATTACHMENT B

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AMERICAN TELEPHONE AND TELEGRAPH COMPANY
LONG LINES DEPARTMENT

January 6, 1966.

Mr. P. R. Easterlin, Vice President
Plant and Engineering
Western Union International, Inc.
26 Broadway
New York, New York

Dear Mr. Easterlin:

We have reviewed the proposals included in your letter of November 15, 1965 as clarified in the letter from Mr. Conn to Mr. Ashley of December 2 concerning direct connection between your message type overseas data services and our domestic DATA-PHONE service.

The currently effective service arrangements would appear to be adequate to meet present needs. As you know, these include tie line connections to those of your customers who are located in your gateways, private line connections to customers in other locations, and back-to-back connections of our DATA-PHONE set with your data equipment. In addition, of course, as you point out in your letter, your overseas data services can be made available to customers in the United States by means of Western Union's Broadband Exchange Service.

Our DATA-PHONE offering is quite different from your message data services. DATA-PHONE service is an adjunct to regular message telephone service rather than a distinctive and separate data offering. If there were to be direct connection between DATA-PHONE service and your message type overseas data services, there would be no restriction whatever on the use of such an interconnected service for voice communication. This would be a radical departure from the existing pattern of international communications and one which we are not persuaded is required by the public interest at this time.

Turning now to the questions you raised concerning modems, inasmuch as we do not believe direct interconnection of our message network and yours is required in the interest of service to the public, any possible operating difficulties due to differences in the modems used on our network and those used overseas need not be resolved. On private line circuits, which can be directly interconnected, there would appear to be no problem in the event the modems used at the distant end will not work with ours. Our customers are permitted to provide their own modems on our private line circuits so long as they do not interfere with or impair the proper operation of the telephone system.

Yours very truly,

H.M. Botkin (signed)
Assistant Vice President

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ATTACHMENT C

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

August 31, 1972

Mr. E.A. Gallagher, President
Western Union International, Inc.
26 Broad Street
New York, N.Y. 10004

As an outgrowth of earlier discussions and meetings on the subject, I am now able to tell you that AT&T agrees in principle to direct electrical connection at your premises of Bell System local loops used to provide Message Telecommunications and Wide Area Telecommunications (WATS) Services with the facilities used by your company to provide Overseas DATEL service. We understand that this connection is for the purpose of making possible the transmission of data or other non-voice communications, as covered in your Overseas DATEL tariff, between telephone customers in the United States and customers in overseas points to which your company is authorized by the F.C.C. to provide Overseas DATEL service.

This agreement to connect is contingent upon your agreement to comply with necessary criteria so as to protect our network and your obtaining a sufficient number of lines to preclude any blockage of incoming calls which would interfere with any of the services offered by the Telephone Company.

The facilities used to provide Message Telecommunications and WATS Services are designed primarily for voice transmission, and are not represented as adapted to the use of customer-provided terminal equipment. From the Telephone Company standpoint, such connection would be permissive, and the Telephone Company would not be responsible for the quality of data and other non-voice transmission between the user's telephone instrument and the point of connection with your DATEL facilities.

There will, of course, be charges for the use of our lines and charges for long distance calls which would apply whether or not an overseas transmission takes place.

We will be glad to meet with you at your convenience to work out the details of this arrangement.

Sincerely,

(Sgd.) R.B. NICHOLS

ATTACHMENT D

RETYPED COPY

WESTERN UNION INTERNATIONAL, INC.

January 29, 1973

G.W. Bates, Esquire
General Counsel
New York Telephone Company
120 West Street
New York, New York

Dear Mr. Bates:

Western Union International, Inc. (WUI) a common carrier whose principal operations are located in New York City, presently provides an overseas "datel" service which furnishes to customers a data operation -- with voice coordination of the data transmission. WUI is seeking authority to expand this service by removing the inhibiting restriction of voice purely as coordination. WUI is already authorized to provide such an unrestricted service to Hawaii.

However, one of the deterrents to expanding this service has been a lack of automatic interconnection with the public telephone switched network.

We should therefore like to obtain from you your agreement to permit telephone subscribers located within the State of New York to automatically interconnect with the overseas facilities of WUI in order that WUI will be in a position to furnish the public within the State of New York an international "dataphone" type of service.

A prompt reply is requested in light of the pendency of proceedings before the Federal Communications Commission which will require WUI to address itself to this question within the next few weeks.

Copies of this letter have been forwarded to the Federal Communications Commission, the Office of Telecommunications Policy and the New York Public Service Commission.

Very truly yours,

E. Brod (Signed)
Vice President & Counsel

cc: Mr. Bernard Strassburg, Chief, Common Carrier Branch, FCC
Mr. Ben F. Waple, Secretary, FCC
Mr. Clay T. Whitehead, Director, OTP
Mr. Joseph C. Swidler, Chairman, PSC
Mr. Samuel R. Madison, Secretary, PSC

ATTACHMENT E

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NEW YORK TELEPHONE COMPANY
LEGAL DEPARTMENT

February 23, 1973

Mr. Ernest Brod
Vice President and Counsel
Western Union International, Inc.
25 Broadway
New York, N.Y. 10004

Dear Mr. Brod:

Your letter of January 29th in which you request automatic interconnect for overseas "datel" service without voice restriction and your letter of February 2nd in which you request the Company to bill our subscribers directly for WUI overseas cablegrams have been referred to me.

After reviewing your requests, it is our conclusion that in view of the pending F.C.C. dockets Nos. 19660 and 19558, a commitment on the part of this Company at this time would be premature. Upon resolution of the two F.C.C. dockets mentioned above, we will be happy to discuss the matter further.

Very truly yours,

Burton K. Katkin (signed)
General Attorney

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ATTACHMENT F

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WESTERN UNION INTERNATIONAL, INC.

February 27, 1973

Burton A. Katkin, Esq.
General Attorney
New York Telephone Company
Legal Department
140 West Street
New York, N.Y. 10007

Dear Mr. Katkin:

Receipt is acknowledged of your letter of February 23, 1973, in which you decline to respond substantively to WUI's requests: (1) for automatic interconnection between telephone subscribers located within New York and WUI's overseas datel facilities (WUI letter, January 29, 1973); and (2) to bill telephone subscribers located within New York directly for overseas cablegrams filed by telephone with WUI (WUI letter, February 2, 1973).

Your letter contains the following:

> "After reviewing your requests, it is our conclusion that in view of the pending F.C.C. dockets Nos. 19660 and 19558, a commitment on the part of this Company at this time would be premature. Upon resolution of the two F.C.C. dockets mentioned above, we will be happy to discuss the matter further."

It is not within the prerogative of you company to avoid responding substantively to WUI's reasonable requests on the grounds of the pendency of certain proceedings before the Federal Communications Commission. That Commission, not New York Telephone Company, will determine the applicability of its proceedings, policies and rules to the overseas services offered by WUI. There is enclosed for your information a copy of a letter, dated September 1, 1971, from the Commission to another telephone company advising it to this same effect.

February 27, 1973

Your prompt reply to our aforementioned requests of January 29 and February 2, 1973 will be greatly appreciated.

Very truly yours,

E. Brod (Signed)
Vice President and Counsel

Enclosure

cc: Mr. Joseph Swidler, Chairman, PSC
Mr. Samuel R. Madison, Secretary, PCS
Mr. Ben F. Waple, Secretary, FCC
Mr. Bernard Strassburg, Chief,
Common Carrier Bureau, FCC

RETYPED COPY ATTACHMENT G

WESTERN UNION INTERNATIONAL, INC.

June 4, 1974

Mr. C.W. Jackson
American Telephone & Telegraph Co.
Director of Business Relations
195 Broadway
New York, N.Y. 10007

Dear Mr. Jackson:

Western Union International, Inc., a common carrier whose principal operations are located in New York City, provides an overseas switched data service known as "Datel", which furnishes to customers data operation -- with voice for coordination purposes.

This service is presently interconnected to the AT&T Long Distance Message Telecommunications network via two wire subscriber access lines and manual data access arrangements provided by the New York Telephone Company. This interconnection arrangement was established in March 1973. In order to improve the quality of Datel calls which are interconnected to the AT&T network, and to automate the setting up and disconnection of calls, WUI proposes that our interconnection for Datel service be changed to one that is more suitable. Our engineering department has reviewed the technical aspects in this area, and their recommendation is that AT&T provide a four wire trunk interconnection into a tandem switching exchange (class 4 office or higher). This type of interconnection would result in improved transmission parameters and greatly improved signalling conditions, as well as allowing some automation of the service.

In addition, we wish to establish a fair and equitable toll settlement procedure for Datel calls, since WUI now absorbs the domestic connection charge for all calls. Presently outbound calls are established on a collect basis leading to the necessity for additional operator assistance and transmission problems due to the operator switchboards.

Summarizing, we are seeking to interconnect Datel service to the AT&T message network in the same manner as any class 5 central office of an independent telephone company might connect to an AT&T toll office. The requested interconnection could be made on a contract or tariff basis.

May we have an early response please?

Very truly yours,

L.A. Cohen (Signed)
Director of Marketing

ATTACHMENT II

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AMERICAN TELEPHONE AND TELEGRAPH COMPANY

June 27, 1974

Mr. L. A. Cohen
Director of Marketing
Western Union International, Inc.
26 Broadway
New York, N.Y. 10004

Dear Mr. Cohen:

This is in response to your letter of June 4, 1974 relative to the interconnection of Bell System exchange services and the overseas "DATEL" service provided by Western Union International Inc. (WUI). As pointed out in your letter, DATEL is a data service utilizing voice coordination which, of course, is not the same as alternate voice-data service. The interconnection is thus between a WUI data service and a Bell exchange voice service which may be used alternatively for data transmission.

The interconnection which now exists in New York City is being made on the basis of a service interconnection whereby each carrier is responsible to its customer for its own service from the point of connection. There is no joint through service responsibility and there is no tariff guarantee of overall quality of the interconnected services to the WUI customer. The Telephone Company is rendering its exchange service to WUI as a customer and has agreed to the connection in the interest of providing access in New York to WUI's overseas DATEL service.

This concept is consistent with the Bell System's interest in expanding public opportunity for data transmission overseas through its application to the FCC for the introduction of overseas DATAPHONE service (Docket No. 19558).

Your letter attempts to draw an analogy to the interconnection arrangements between the Bell System and Independent telephone companies, but such an analogy is not valid as the circumstances are quite different. Bell Companies provide a joint through service with the Independents under tariffs in which the

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Independents concur, and the customer pays a rate for service between the terminal points. Thus, the Telephone Companies are partners in a joint undertaking. Under the existing DATEL interconnection arrangements WUI is free to absorb the charges for the domestic service or to include these charges in its DATEL rate structure. Since there is no joint through service, there is no need for a toll settlement procedure.

It may be that the existing arrangements for setting up and disconnection of calls can be improved upon. In view of this we suggest that WUI contact Mr. A.R. VanPetten, Business Relations Coordinator of the New York Telephone Company to explore the possibility of automating the interconnection arrangements on WUI premises.

Yours very truly,

C. W. Jackson (Signed)
Business Relations Director

cc: A.R. VanPetten

ATTACHMENT I

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GENERAL TELEPHONE COMPANY OF FLORIDA

December 12, 1974

Mr. K. M. Jockers
Western Union International, Inc.
One WUI Plaza
New York, New York 10004

Dear Mr. Jockers:

This is in response to your letter of October 25, 1974 and the several conversations and meeting with Mr. S. E. Mitteldorf concerning a Tampa-New York trunk group for Datel.

Through the conversations and meeting, as well as our own investigation, we have reviewed this matter in considerable detail. The initial consideration was that a dedicated trunk group with some combination of WATS/INWATS would meet your requirements. However, as covered in the meeting of November 8, because of translation requirements and the fact that we are not the principal city for INWATS translation, such arrangement does not appear feasible.

Further discussion and review indicates that from a technical standpoint, the only workable arrangement would be the dedicated trunk group with an 813 NNX code reserved for your use. The message toll network would then be utilized for handling Datel traffic between Tampa and the point of origination or termination (within the United States) with the associated message toll charges. For several reasons, this would appear to be an uneconomical method of operation.

In addition, the reservation of an NNX code for such restricted use causes us considerable concern. While this may not be an immediate problem there is a limit to the number of such codes available and to dedicate an entire code to such a few subscribers appears imprudent. Accordingly, we do not believe that further exploration of such an arrangement would be worthwhile for either company.

December 12, 1974

We share your concern in regard to the problems you are facing with the present arrangement and hope that a satisfactory solution can be found. It would seem that this might best be accomplished right in the New York area.

Very truly yours,

John H. Hancock (Signed)
Director of Business Relations

T. W. Scandlyn
Assistant Vice President

AT&T
American Telephone and
Telegraph Company
195 Broadway
New York, N. Y. 10007
Phone (212) 393-3342

December 5, DEC 5

The Honorable Richard E. Wiley
Chairman
Federal Communications Commission
Washington, D. C. 20554

Re: Overseas Dataphone Service
Inquiry, Docket No. 19558

Dear Chairman Wiley:

By letter dated November 18, 1975, we furnished you with our views respecting Western Union International, Inc.'s request for a deferral of the decision in this proceeding. We are now writing in response to a similar request of ITT World Communications Inc. (ITT Worldcom), contained in a letter to you dated November 13, 1975.

Essentially, ITT Worldcom urges that the subject proceeding be delayed while the "dataphone issue" is incorporated into and considered in Docket No. 18875 -- the Commission's inquiry into the policies to be followed in future licensing of facilities for overseas service. What ITT Worldcom has in mind, therefore, is no less than a modification of the established issues and procedures in both dockets.

Two specific reasons are given for the request. First, a number of foreign correspondents -- presumably all record communication entities like ITT Worldcom -- have indicated they prefer to have international data transmission the responsibility of the international record carriers and believe the FCC should not take any action contrary to such preference without consulting with them in advance. Second, there will be a need for coordination with the foreign administrations if the Commission determines that overseas Dataphone® service would be provided via international record carrier facilities.

Contrary to ITT Worldcom's representation, these reasons do not represent "recent developments". It is nothing new that there are foreign record carriers which prefer to have their U.S. counterparts provide overseas Dataphone service. And, as for the need for coordination between the foreign administrations and the appropriate U.S. entity or entities when the Overseas Dataphone Inquiry is decided, that has

always been obvious. Therefore, both considerations could have been discussed two and one half years ago in ITT Worldcom's Docket No. 19558 Comments. ITT Worldcom would most certainly have discussed them at that time had it believed them to be significant.

ITT Worldcom purports to justify the inclusion of the "dataphone issue" in Docket No. 18875 by stating it considers Docket Nos. 18875 and 19558 to be interrelated. However, it gives no reason for this view and furnishes no explanation of why such issue, already fully briefed in one proceeding, can be more effectively explored in another proceeding involving many different issues.

Docket No. 18875, like the other matters discussed above, is not a "recent development". ITT Worldcom could have urged the requested procedural modifications when it filed its Comments over two and one half years ago.* Presumably that was not done because adding the "dataphone issue" to a policy making docket concerning facilities planning made as little sense then as it does now.**

We therefore respectfully submit that ITT Worldcom's request for deferral of the decision in this matter is without merit and should be denied on both procedural and substantive grounds. It is far too late in the day to consider miscellaneous allegations which could have been directed to the Commission in a timely fashion had the carriers involved seen fit to do so.

Very truly yours,

J. W. Brandley

Assistant Vice President

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* Docket No. 18875 was inaugurated on June 16, 1970, and produced, on June 25, 1971, a Statement of Policy and Guidelines for Overseas Communication for the Atlantic Ocean basin. The Statement indicated that similar statements and guidelines for other areas would follow.

** As indicated in its Comments in this proceeding, AT&T's overseas Dataphone proposal does not involve the construction of special facilities for data service, but rather the permissive use by customers of the international telephone network for non-voice transmissions that are technically compatible with the normal voice network facilities.

cc: The Honorable Robert E. Lee, Commissioner
The Honorable Charlotte T. Reid, Commissioner
The Honorable Benjamin L. Hooks, Commissioner
The Honorable James H. Quello, Commissioner
The Honorable Glen O. Robinson, Commissioner
The Honorable Abbott M. Washburn, Commissioner
Mr. Walter R. Hinchman, Chief, Common Carrier Bureau

ITT World Communications, Inc.
RCA Global Communications, Inc.
TRT Telecommunications Corp.
Western Union International, Inc.
U. S. Department of Justice
Anti-Trust Division

T. W. Scandlyn
Assistant Vice President

AT&T
American Telephone and Telegraph Company
195 Broadway
New York, N. Y. 10007
Phone (212) 393-3342

December 11, 1975

The Honorable Richard E. Wiley
Chairman
Federal Communications Commission
Washington, D. C. 20554

Re: Overseas Dataphone Service
Inquiry - Docket No. 19558

Dear Chairman Wiley:

In a letter to your office dated November 25, 1975 RCA Global Communications, Inc., (RCA) requests a deferral of the decision in this proceeding. RCA's letter expresses a general concern that the record in this proceeding "may have become stale". It also asserts that the Commission's recent remarks in Docket No. 18875* concerning the need for consultation with foreign administrations on facilities planning matters have led some of RCA's foreign correspondents to expect the Commission to defer action in the Overseas Dataphone® Inquiry until it has obtained their views. On the basis of the foregoing, RCA recommends the establishment of a joint overseas Dataphone study group under the auspices of the Commission, the U.S. carriers, and foreign telecommunications organizations such as CEPT.

Like the letters recently submitted in this proceeding by ITT World Communications, Inc., and Western Union International, Inc., RCA's letter fails to show that there have been significant developments which require the reopening of the record in the Overseas Dataphone Inquiry.

*Docket No. 18875 is the Commission's Inquiry into the policy to be followed in the future licensing of overseas communications facilities.

Basically, all RCA offers is a recommendation that a joint study group be formed to participate in the inquiry -- something it could have advocated in its comments in the subject proceeding over two and one-half years ago had the employment of such a study group been considered suitable. Nothing has occurred since then to make the recommendation more appropriate.* While it is true that in Docket No. 18875 the Commission has recently referred to the value of coordinating with the foreign administrations on facilities planning matters, it had acknowledged this previously, even before the Overseas Dataphone Inquiry was inaugurated.** And there is nothing in the recent remarks that could reasonably lead RCA's correspondents to expect the Commission to solicit their views before issuing a decision concerning Dataphone. On the contrary, AT&T's correspondents in providing international telephone service have continuously urged the removal of the present artificial restrictions against overseas Dataphone use.

At the opening of its letter, RCA admits that what has prompted the international record carriers' recent letters was "the Commission's indication on its calendar that it would shortly consider the issues involved in the international Dataphone Inquiry". Their responses to such indication have been eleventh hour requests to add issues, expand procedures and otherwise defer the expected decision. Considering the lack of a

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* AT&T's overseas Dataphone proposal in this proceeding does not involve the construction of special facilities for data service but rather the permissive use by customers of the international telephone networks for non-voice transmissions that are technically compatible with the normal voice network facilities. Further, there are C.C.I.T.T. Recommendations concerning international data transmission via the general switched telephone network.

**See, for example, the June 25, 1971 Statement of Policy and Guidelines in Docket No. 18875 (30 FCC 2d 571) where, in paragraph 6, the Commission states that it has "taken careful account of the expressed views of the European Administrations with respect to transatlantic facilities".

sound basis for their requests, the conclusion is inescapable that the record herein is not stale and that international record carriers are motivated entirely by a wish to delay a decision on the merits.

Very truly yours,

Assistant Vice President

cc: The Honorable Robert E. Lee, Commissioner
The Honorable Charlotte T. Reid, Commissioner
The Honorable Benjamin L. Hooks, Commissioner
The Honorable James H. Quello, Commissioner
The Honorable Glen O. Robinson, Commissioner
The Honorable Abbott M. Washburn, Commissioner
Mr. Walter R. Hinchman, Chief, Common Carrier Bureau

ITT World Communications, Inc.
RCA Global Communications, Inc.
TRT Telecommunications Corp.
Western Union International, Inc.
U. S. Department of Justice
Anti-Trust Division

ITT World Communications Inc.

67 Broad Street
New York, N.Y. 10004
Telephone (212) 797-8047

George F. Knapp
President

January 8, 1976

The Honorable Richard E. Wiley
Chairman
Federal Communications Commission
Washington, D.C. 20554

Re: Overseas Dataphone Services Inquiry
FCC Docket No. 19558

Dear Chairman Wiley:

In a letter dated November 13, 1975, ITT World Communications Inc. (ITT Worldcom) noted the Commission's intention to consider the issues raised in its overseas dataphone service inquiry, and we cited the lapse of time since comments were submitted. In partial justification of the need for an updating of the record in the referenced proceeding, we called attention to the lack of coordination with responsible foreign carriers and the pendency of related proceedings concerning the planning of overseas facilities.

American Telephone and Telegraph Company (AT&T) responded in a letter dated December 5, 1975 stating that "It is far too late in the day to consider miscellaneous allegations which could have been directed to the Commission in a timely fashion had the carriers involved seen fit to do so."

ITT Worldcom's November 13th letter was not intended to do more than indicate the need for development of current and additional facts. Notwithstanding AT&T's arguments, the fact remains that the record is three years old. Thus, fair and reasonable disposition of the subject inquiry requires Commission review of interconnection arrangements in light of AT&T's monopoly powers and its recent anticompetitive actions. A few recent developments are:

(a) In 1974, the U.S. Department of Justice filed a civil action against AT&T and affiliated companies, charging, inter alia, obstruction of interconnections between other

carriers and the Bell System (U.S. District Court, District of Columbia, Civil Action No. 74-1698);

(b) in 1974, the U.S. District Court for the Southern District of New York enjoined New York Telephone from reducing or impairing its d.c. tieline services which are required to connect the international record carriers (IRCs) with their international telex customers in the franchised area of that AT&T subsidiary (ITT World Communications Inc. vs. New York Telephone Co., 381 F Supp 113);

(c) in Western Union International, Inc.'s letter to you, dated December 4, 1975, it is alleged that AT&T and certain of its subsidiaries have refused to negotiate reasonable interconnection arrangements between its domestic facilities and the facilities of that IRC; and

(d) as more fully described in pleadings relating to a pending Section 214 application (FCC File No. I-P-C-6019-44), AT&T obstructed ITT Worldcom's efforts to compete in the provision of certain private line record services by misrepresenting the availability of connecting domestic services. (Unfortunately, the FCC staff has compounded AT&T's misdeed by authorizing that carrier to provide the overseas portion of the DoD "autosevocom" circuit to Germany, in violation of the Commission's TAT-4 policy decision which precludes AT&T from offering overseas private line record services -- in this case the signal received from the customer, transmitted by the carrier, and delivered by the carrier is conceded to be non-voice.)

With this background of anticompetitive charges and experiences during the last two years, ITT Worldcom is fully justified in expressing very serious concern with the possibility that AT&T might be given unconditional authorization to "compete" with the international record carriers in the provision of overseas record services.

Some of our concern stems from AT&T's unrestricted access to potential hinterland customers of the IRCs in the rendition of private line services between Hawaii and the Mainland. As we have noted in other proceedings, AT&T enjoys ownership interests in the domestic facilities it uses in competition with IRCs which are required to lease such facilities. Moreover, AT&T is not burdened with the physical limitations of international gateways, and it does not have to rely on interconnection with domestic carriers to render its services.

In light of these special advantages, as well as its effective control of domestic dataphone services, there is little wonder that AT&T is ready and willing to proceed with the expansion of its overseas services to include dataphone (record) services. Against the IRCs, AT&T would face no contest. But we do not believe that the Commission would intentionally destroy the international record carrier industry, the most successful area of competition in the communications common carrier field, without considering appropriate and necessary conditions. Examples of such conditions include FCC ordered:

(a) corporate and operational separation of Comsat's international and other activities (35 F.C.C. 2d 844, 851-853); and

(b) corporate and operational separation of RCA's international and domestic activities (Memorandum Opinion Order and Authorization (FCC 75-1246), released November 6, 1975, paragraphs 91-98).

After imposing those conditions on carriers which have a miniscule market base compared to AT&T, the Commission could not consider competition between AT&T, as presently organized, and the IRCs. Accordingly, before serious attention could be given to an AT&T application to provide overseas dataphone services, its overseas activities should be separated from its domestic landlines activities under circumstances wherein its overseas entity would be entitled to no better access to AT&T's domestic services and facilities than the IRCs.

ITT Worldcom does not know what alternatives are being considered by the Commission. To date, staff recommendations have not been released for comment. But we are convinced that the introduction of AT&T Long Lines into the international record carrier business would result in the eventual monopolization by it of such services.

Finally, notwithstanding AT&T's suggestion that the authorized U.S. carrier(s) can do all the necessary coordination with foreign carriers later, presumably without FCC inquiry or supervision, ITT Worldcom reaffirms its position that the establishment of a new service is a significant part of planning. (At this point, we doubt that the Commission can tell whether all of the circuit forecasts it has recently received in Docket No. 18875 include overseas dataphone services or not.) Clearly, there is no current understanding of foreign carriers' intentions regarding the development of international data and other record services.

While AT&T seeks to oversimplify the entire matter by arguing timeliness and procedural issues, ITT Worldcom is seriously urging the Commission to raise and consider all of the pertinent issues. It is never too late to do right.

Respectfully submitted,

George F. Knapp

cc: The Honorable Robert E. Lee
The Honorable Charlotte T. Reid
The Honorable Benjamin L. Hooks
The Honorable James H. Quello
The Honorable Abbott Washburn
The Honorable Glen O. Robinson
Mr. Walter R. Hinchman
Other interested parties

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ANDREW SAKS
VICE-PRESIDENT
OPERATIONS

February 21, 1973

Mr. Dean Burch
Chairman - Docket 19558
Federal Communication Commission
Washington, D. C. 20554

Dear Mr. Burch: RE: DOCKET 19558, "INQUIRY INTO POLICY TO BE FOLLOWED IN FUTURE AUTHORIZATION OF OVERSEAS DATA"

An immediate ruling by your Committee would be deeply appreciated to permit the deaf people to utilize the normal telephone with special teletypewriters equipment for the deaf on overseas calls.

Western Union International, RCA Global, and I.T.T. do not provide expedious and economical facilities for transmission of these Teletypewriters for the Deaf calls and work intolerable hardships upon the many deaf people who are unable to speak or hear the Overseas Operators to explain the nature of these calls.

The Applied Communications Corp. is the originator and developer of the Phonetype Acoustic Coupler, which when used in conjunction with old teletypewriters make it economically possible for deaf people to use the normal telephone. There are presently over 4,000 such stations, most of which are in the USA and Canada, with some in England, Sweden, Switzerland, Philippines, and New Zealand. This network is known as the Teletypewriters for the Deaf network.

The British Post Office wishes to arrange immediate public demonstrations of this equipment and to make overseas call to the USA as soon as a ruling (favorable) may be had from the F.C.C. Please keep in mind that the Teletypewriters for the Deaf, Inc. is a not-for-profit, charitable organization. Ruling information for this should be sent directly to:

Ms Linda Fulman IMTR-F213
Alder House
Aldergate Street
London ECI, England

Dr. H. Latham Breunig, Pres.
Teletypewriters for the Deaf, Inc.
PO Box 622
Indianapolis, Indiana 46206

The Teletypewriters for the Deaf system uses a fully automatic switched "make-and-break" half-duplex code of 1400 cps and 1800 cps which are in the middle of the voice-grade frequency range of the telephone network.

This is quite different from the full-duplex, "continuous frequency-shift tones" of higher frequencies as used in TWX, TELEX, DATEL, etc.

We hope your Committee will act rapidly in allowing handicapped people to use the Teletypewriters for the Deaf system on normal voice-grade telephone lines for overseas calls.

Sincerely yours,

James C. Marsters

James C. Marsters
President
Applied Communications Corp.

cc: American Tel & Tel. Co.
Communications Satellite Corp.
ITT World Communications, Inc.
RCA Global Communications, Inc.
Teletypewriters for the Deaf, Inc.
United States Independent Telephone Association
Western Union International, Inc.

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JUN 21 1971
CHIEF, COMMON CARRIER BUREAU

XEROX

OFFICE OF GENERAL COUNSEL
LAW DEPARTMENT

June 17, 1971

Mr. Bernard Strassburg, Chief
Common Carrier Bureau
Federal Communications Commission
Washington, D. C. 20544

Dear Sir:

The purpose of this letter is to request the Commission to give consideration to the removal of limitations currently imposed upon the international transmission of data and facsimile signals.

Today, the public telephone network is increasingly used for the domestic transmission of such signals. Its use for this purpose is authorized by AT&T Tariff No. 263 which also permits the use of customer owned and maintained equipment, both with acoustical and electrical coupling. Except for Canada, however, that same Tariff restricts international calls made through the public telephone network to the transmission of voice signals only. There are certain limited exceptions to this restriction relating to usage by the press and governmental agencies which, however, are of no benefit to business or the public at large.

Similar restrictions have not been imposed in other countries. For example, a user in England may transmit data and facsimile over the public telephone network to his correspondents in Western European countries. Because of the restrictions imposed by Tariff 263, however, he may not do so with respect to his American correspondents.

Thus, the result of this restriction is to require American users having need for international data or facsimile transmission or reception to either lease dedicated international private lines or rely upon significantly more cumbersome procedures utilizing multiple carrier facilities.

Many users cannot economically justify a dedicated international private line. They do, however, have significant requirements for demand type service. In addition, users can have requirements for international service from multiple locations within this country which cannot be met by

the more limited point-to-point service of a private line. Such service would be available if interconnection with the public telephone network were permitted.

Currently available procedures using multiple carrier facilities for international transmission of data and facsimile signals are likewise unsatisfactory to meet the needs of many users. Those procedures presently involve a recording and retransmission of the signal at each international gateway and result in such loss of time, flexibility and message quality and confidentiality as to be unacceptable even without consideration of the costs involved.

In short, we believe a need now exists for permitting the utilization of the public telephone network to transmit data and facsimile signals internationally. As a result of the international marketing of the Xerox Telecopier facsimile transceiver, we believe this need to be particularly significant with regard to Western Europe and Latin America. In the final analysis, however, every U. S. company which transacts business in another country as well as every foreign company which transacts business in the United States has at least a potential need for this service.

The importance of this service, however, is not based upon projected high volume traffic since customers having high volume requirements will probably tend to use leased lines. Rather, it is based upon the needs of the customer who, from time to time, has urgent requirements for the immediate and confidential transmission of important documents and data to various locations throughout the world. These needs can be critical to the customer whether he is large or small.

Commission authorization of the removal of the restrictions currently imposed by Tariff 263 would enable customers to meet these needs and thereby increase both the value of service available to users and the effective use of international facilities (for example, the use of off-peak time for data transmission).

We are, of course, aware that the restrictions currently imposed are reflective of difficult policy considerations concerning the roles that the different United States international carriers should play in the handling of international communications traffic.*/ We believe, however, that the time

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*/ See, TAT-4 decision, 37 F.C.C. 1151 (March 17, 1964).

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is now appropriate for the Commission to reexamine these restrictions.

This reexamination should consider whether, in light of the increasing use of acoustical coupling for data and facsimile transmitting equipment, the current restrictions are in fact viable. Overall and more importantly, however, it should consider whether, in view of the continuing rapid growth in and the changing nature of the needs of international communications users, these restrictions continue to be in the public interest or whether, by imposing arbitrary limitations upon adaptation to technological advance, they may ultimately result in adverse consequences for the long-range performance of the international communications system as a whole.

We request your early consideration of these questions. Xerox will, of course, be willing to cooperate in any proceeding which you may undertake in this regard.

Respectfully submitted,

Charles L. Bucy

Charles L. Bucy

CLB:nt

CERTIFICATE OF SERVICE

I hereby certify that the attached document has been served on the attorneys for all parties to this action. Copies were served by first class mail, postage prepaid, on the following parties at the listed addresses:

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Copies were delivered by messenger to the following parties at the listed addresses:

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John S. Kinzey

New York, New York
July 30, 1976